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ORIGINAL ARTICLES.

THE ALLEGED USE OF DUM-DUM BULLETS IN THE JAPANESE-RUSSIAN WAR.

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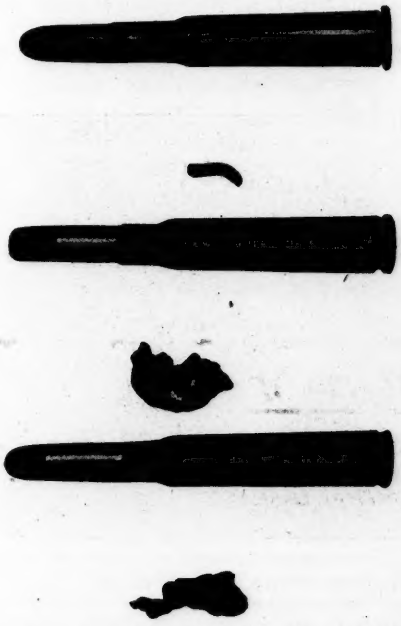
THE accompanying reproductions of photographs were received by the writer from Dr. Wm. B. Noyes, to whom they were sent by Mr. Franklin Clarkin, Special War Correspondent of the *New York Evening Post*. The photographs were taken immediately after the battle of Liao-Yang, and represent some of the unusual effects of modern rifle projectiles; together with cartridges, said to have been found upon Russian prisoners, and fragments of the jackets of bullets. The fragments of jackets or coverings of bullets were recovered from wounds in Japanese soldiers.

Fig. 1.

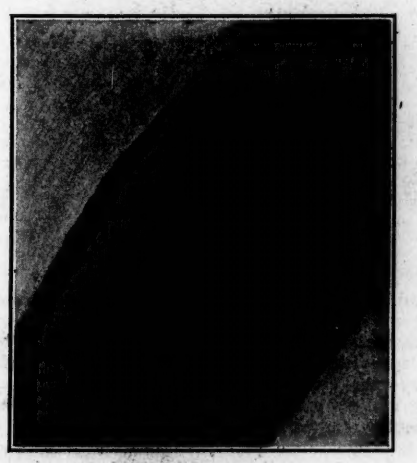


Reproductions of photographs of cartridges said to have been found on Russian prisoners captured at the battle of Liao-Yang, and of fragments of mantles or jackets of bullets. These fragments were removed from the wounds of Japanese soldiers.

The cartridges show a portion of the jacket cut away, and have undoubtedly been tampered with. The fragments of jackets taken from the wounds are such as might have been imprisoned in the tissues after having been separated from bullets deformed either previously or subsequently to their entrance into the body.

The phase of the subject of interest to the surgeon relates to the manner of production of these wounds, and the possibility of their being caused (1) by bullets belonging to the regulation arm, but from which the covering or jacket had been partially removed with the intention of producing a mushrooming effect upon striking the body, and with the result of inflicting extensive shattering and mangling of the parts; (2) by the shattering effects of the modern oval projectile under exceptional conditions, even when the jacket remains intact; and (3) by modifications of the normal course of the bullet in its flight (ricochet shots), attended or otherwise by disturbances of the jacket.

Fig. 2.



Bullet Wound.—The note accompanying this photograph states that the soldier was shot at the range of about 500 meters while kneeling, and that the bone was broken and the arm extremely swollen.

The distance at which the soldier was brings the case within the distance where the most destructive effects may be expected, even from a projectile, the metal jacket of which had not been tampered with. These destructive effects include extensive shattering of bone and the tearing of the soft parts along the canal and at the point of exit.

1. That these wounds could well have been produced by bullets, the jackets of which had been removed in whole or in part, is at once evident. The mushrooming effect at the place of exit is well-shown in several of the photographs. In fact, this effect is shown to such an exaggerated extent in some of the photographs that it seems incredible that so much

damage could be inflicted by so small a projectile, even when spread out into a mushroom shape, as claimed. The comparatively small wound of entrance, however, as shown in Fig. 2, sets at rest any doubt upon this point in this particular case at least (see comment). The alleged wound of entrance shown in Fig. 3, however, certainly appears more like a wound of exit, and this is

Fig. 3.

Bullet Wound.—The accompanying note states that the soldier was shot at a range of about 300 meters while lying, and that the bullet struck on the left forearm and made its exit near the elbow and grazed the upper arm. The entrance is oval, 4 cm. long and 3.5 cm. wide. The exit is circular and the diameter is 2 cm.

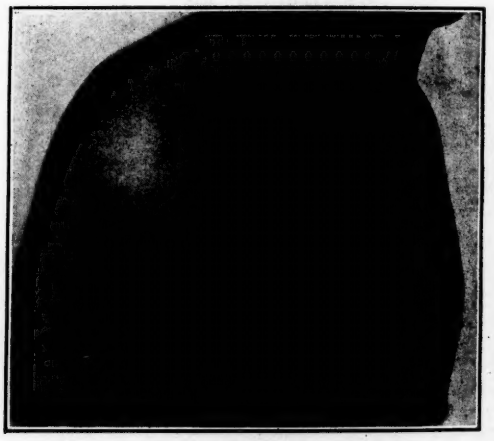
The appearance presented in this case, and the fact that the soldier was lying down when shot, makes it more than probable that he was struck by a ricochet shot, the bullet traveling near the ground and encountering some object in its course, and that only a portion of the bullet escaped and made the furrow in the arm. Either this or the shot took the opposite direction, making first the furrow in the arm, then the comparatively small wound in the upper part of the forearm, and finally making its exit at the larger wound in the forearm.

strengthened by the comparatively small size of both the furrow in the arm and the upper one of the two bullet wounds in the forearm. In Fig. 4 both the wounds of entrance and exit are shown; the comparative size of the former suggests that either the bullet was deformed before entering the body, or that it has been converted into a ricochet shot (see comment). In Fig. 5 the wound of entrance is shown, but no wound of exit, which leaves room at least for the supposition that none existed, the bullet having lodged in the body, a not uncommon occurrence in ricochet shots (see comment). In Fig. 6 the fact that the wound of entrance was circular is mentioned; other than this no information concerning it is given (see comment). In the note attached to Fig. 7 an enormous wound of exit is shown, suggestive of a shrapnel bullet wound, such as is shown in Fig. 8.

It would appear, therefore, that no proof exists that these wounds were made by bullets such as shown in the photographs, even though these were found with a portion of the jacket removed; the bullet belonging to the regulation arm, with its jacket similarly tampered with, will produce the same effects.

2. As to the shattering effects of the modern oval projectile, even when the jacket remains intact, the first point to engage our attention in this connection is the explosive effects of the so-called "projectile air" in wounds. It has been been claimed that, when a firearm with high-muzzle velocity strikes an object while it still possesses what is known as great internal energy, it compresses and drives ahead of it into the tissue a small column of air. This column of

Fig. 4.



Bullet Wound.—The soldier was shot at the range of about 200 meters, while kneeling. The entrance and exit are both very large. The wound resembles one made by the fragment of a shell. The soldier affirms, however, that no shells were coming that way at the moment.

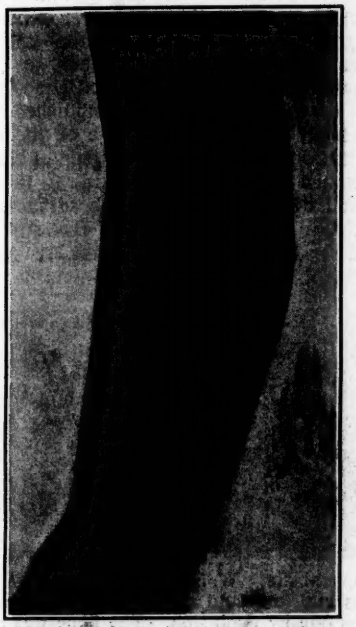
This injury might well have been caused by a bullet which had become deformed before entering the body by striking some object (ricochet shot), or, passing through some other body which, without necessarily disturbing its mantle, converted it into a "Querschläger."

air exercises an expansive force, and is said to produce the explosive effects sometimes noted along the bullet channel and at the point of exit. The explosive effects are said to be proportional to the size of the bullet, its obtuseness at the front, and its velocity, since these necessarily govern the amount of explosive air driven before it.

In the days of large and blunt rifle projectiles

the theory of "projectile air" was a tenable one, the more so for the reason that experiments, consisting of the dropping of bullets from a height into water, showed that a certain amount of air was forced into the water with it, as well as a further demonstrable portion of air enclosed by the water in the opening made by the bullet in entering and passing through the

Fig. 5.



Bullet Wound.—The note states that the wound of entrance, as shown in the picture, is 3 cm. long and 2 cm. wide.

The oval appearance presented by this injury is such as is produced by a bullet which loses its position relative to its long axis, and strikes the body sidewise or crosswise (Querschläger effect). If there is no wound of exit this would strengthen this view, since, in ricochet shots the "internal energy" is lost and the rotation imparted to it by the rifling of the barrel is disturbed.

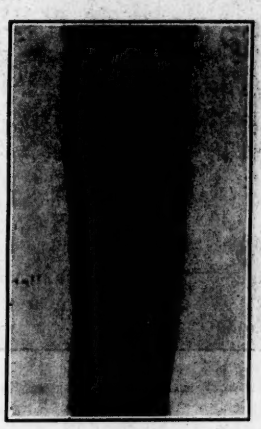
water, seemed to sustain the theory. The air carried in by the bullet was estimated at twenty times the volume of the bullet itself (Longmore), It is to be doubted, however, whether a modern small-bore bullet could produce sufficient forced air pressure as to cause the destructive effects shown in these photographs.

Hydrodynamic pressure, it is claimed, influences the action of the bullet in a marked degree, and is used at the present time to explain the explosive or shattering effects of the entrance of the projectile into the tissues. The pressure effect rests upon the incompressibility of water and the narrowing of the space which it occupies in the tissues as a result of the transfer of pressure in all directions. It therefore follows that the most marked destruction takes place in organs containing the most water. The effect is the more intense the more fluid the organ contains, and the shorter the distance at which the shot is fired. The effect increases (*a*) with the amount of fluid; (*b*) with the velocity of the projectile; (*c*) with the increase in caliber of the projectile, and (*d*) with deformity of the projectile (Lardy, Encyclopädie der gesammten Chirurgie, Leipzig, 1901).

Kikuzi (quoted by Lardy) showed that an 8 mm. steel mantle projectile showed at 100 meters a hydrodynamic pressure equal to 6.4 atmospheres, while an 11 mm. projectile showed a pressure of 8 atmospheres.

The hydrodynamic pressure theory rests upon a more substantial basis than the hydraulic pressure theory of Busch, Kocher and Reger, according to the results obtained of experiments conducted by the medical department of the Prussian army. These experiments showed that the same explosive effects could be obtained whether the fluid was confined in closed or open

Fig. 6.



Bullet Wound.—The note states that the soldier was shot at the range of about 700 meters, while kneeling. The picture shows the wound of exit, the diameter of which is stated to be 8 cm. The statement is also made that the bone was "smashed." The entrance, located at the back of the arm, is said to be circular. The position of the soldier when struck afforded good opportunity for a ricochet shot and a previously deformed bullet. The "smashing" of the bone and the large area of destruction, go hand in hand. The statement that the wound of entrance was circular does not suffice to fix the fact that mushrooming took place after entrance, in the absence of a statement as to the size of the wound.

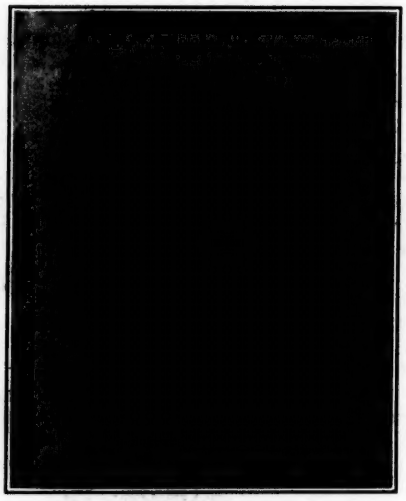
containers. In organs in which water is present it was found that the effect depended more upon the amount of fluid which they contained and on the energy of the penetrating projectile than upon the application of hydraulic pressure.

The hydrodynamic pressure theory of the shattering effects of projectiles is generally acknowledged to be applicable to gunshot

wounds of organs containing considerable fluid, notably the brain. The heart, stomach and intestines, particularly when these are struck at short range, may be similarly acted upon. The hydrodynamic theory, however, will scarcely serve to explain the conditions present in the localities shown in the photographs.

The rotation theory has been advanced to explain the appearances of an explosive effect upon the tissues traversed by a bullet from a rifled forearm (Busch). While it is probably true that a revolving body may draw the surrounding parts into the circling influences of its own motion, it is not at all probable that a projectile in striking a body at a high velocity can exercise

Fig. 7.



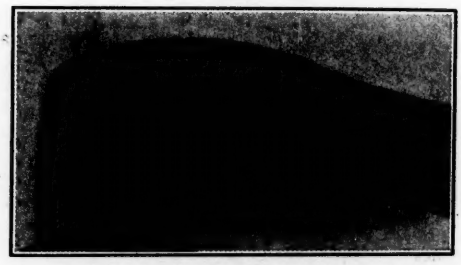
Bullet Wound.—This injury was received at the range of about 600 meters, the soldier lying down. The picture shows the wound of exit, which is stated to be 9.5 cm. long and 5 cm. wide.

The wound of exit only is described in the note. In the position assumed by the soldier when hit, ricochet shots are most likely to occur, the adversary also lying down and the shots traveling near the earth and encountering various objects in their course. It is not stated whether or not the bone was shattered. The injury is not unlike that shown in the next figure, said to be a shrapnel bullet wound.

any such influence. The ratio of the rotation to the velocity renders this impossible, as shown by Lardy. This observer showed by experiments that, traveling at the rate of 620 m. per second, a projectile makes 2,480 rotations upon its long axis, or four rotations per meter. There is no portion of the body where the bullet would be likely to traverse a sufficient distance to render the effects of the rotation other than insignificant. But a single rotation would be performed by the bullet in passing through 25 cm. of tissue. This estimate does not take into account the fact that the rotation is lessened by the resistance which the bullet meets with in its passage through the tissues. The rotation theory, therefore, can be dismissed in so far as it has any bearing upon the question at issue.

3. In considering the third proposition, namely, the effects due to modifications of the normal course of the bullet in its flight, attended or otherwise by disturbance of the jacket, a brief study of the experiments of Peter Bruns (Beiträge zur klinischen Chirurgie, Vol. 19, 1897) may be of interest. This observer experimented with the German model of the self-loading Mauser pistol of 7.5 mm. caliber, at distances of 10 and 20 m. He found that the size of the wound of entrance and exit diminished with the decrease in velocity or increase of the distance. Modifications of the size and shape of the wound of entrance were found to be due to the manner in which the missile struck the surface. When at or near a right angle to the surface, the wound was circular; otherwise it was oval.

Fig. 8.



Shrapnel-bullet Wound.—The picture shows the exit, 15 cm. long and 10 cm. wide. The wound resembles one by explosion. The bone was shattered. The note states that the injury is different from ordinary wounds by the shrapnel bullets.

Glancing shots were characterized by furrows and more or less torn and irregular edges. The point of exit was larger, as a rule, than the point of entrance. The former was liable to greater variations than the latter, these depending upon the elasticity and mobility of the part and the direction which the bullet takes in escaping from the body. Thus, when the projectile leaves the part in other than a direction coincident with its long diameter, the wound of exit is oval or irregular. The largest diameter reported, in which the bullet traversed muscular tissues alone, was less than double the diameter of the projectile (14 mm.). The track of the bullet in the muscles always showed a smooth lumen; the diameter of the latter was generally smaller than that of the projectile.

The influences exerted by shattering of bone upon the damage inflicted at the place of exit is well brought out by Bruns' observations. With more or less comminution of the bones of the extremities, correspondingly large and ragged points of exit of the bullet were observed. To this rule, however, there were exceptions, particularly in the case of the upper arm.

In summing up the observations of Bruns, based upon the experiments above alluded to, it may be said that the damage inflicted by the emergence of the projectile, other things being equal, varies according to the distance. In shots up to 50 m. with the arm employed there is in the majority of cases an area of destruction of muscles which is caused by fragments of bone forced along by the projectile. The area is small, not greater in size, usually than that of a walnut, and the track of the bullet is smooth and either of the same size as the caliber of the projectile or slightly larger; it contains more or less bone debris. In shots delivered from a distance of from 100 to 300 m. there is never any area of destruction of muscles, and the canal of exit is smooth and contains a small amount of bone debris. According to Bruns, the fundamental distinguishing features for near and distant shots lie in the variations observed in the wounds of entrance and exit.

In applying these observations to the conditions under review, it must be admitted that, while the experiments were made by a smaller arm than that employed by the Russian army, still with the exception as to size, the character of the weapon and the projectile were practically the same. In fact, Bruns adds to his observations estimates of the destructive effects at the point of exit of the projectile in the case of the 88 model (Mauser), the limit of shattering effects which he states to be 1,600 and 2,000 m. At the former distance there is still some slight destruction, but this disappears entirely at 2,000 m.

Applying these estimates to the cases in question, even at distances of 200 to 700 m., as stated in the accompanying notes, such destructive effects might be expected, however liberally one might be inclined to interpret Bruns' experiments.

As to the frequency of alterations of the shape of intact mantle bullets, the experiments of von Coler and Schjerning,[1] reported at the Twelfth International Medical Congress, are of value. According to these observers in 4.5 per cent. of all hits deformity of the bullet occurred to a greater or lesser extent. If only hits of the bone are taken into consideration, the percentage is very much increased. In wounds of the soft parts alone there was never noted any deformity of the projectile. Impact against the long bones of the body caused the most marked variations in the shape of the bullet, and in the bones themselves there are certain parts, harder than the rest, which cause the most pronounced deformities. As instances of the latter may be mentioned the linea aspera femoris and the edges of the tibia.

Von Coler and Schjerning call attention to the fact that a distinction must be made between deformity of the projectile caused by the body and those which result from impact upon some object outside of the body. In case the projectile is broken by such impact the fragments may become accidental hits and considerable damage caused thereby, even though the fragments themselves have lost none of their force.

The character and extent of injuries made by deformed bullets were found to be proportional to the deformity of the latter. It was also noted that in all cases of marked shattering effects the result of tearing of the mantle and mushrooming of the leaden body of the projectile there was also extensive destruction of bone, as well as of the soft parts at the wound of exit. These effects were in no way less than those wounds made by the leaden unjacketed mushroomed bullets of former times.

Concerning the question of "ricochet shots" or bullets that have assumed a position more or less sidewise or crosswise before entering the body ("Querschläger") it was found that, in addition to the well-known fact that these deviations from the normal course of the projectile were due to the latter striking such objects as tree-branches, etc., it was found that its passage through several different media, or through bodies that offer more or less resistance to the course of the bullet, produce the same effect. Penetration of several portions of the body without change in position of the long axis of the projectile is declared to be an exceedingly rare circumstance (see Fig. 3 and comment).

The amount of damage inflicted by a ricochet shot depends upon the amount of energy remaining after the bullet has ricochetted. A portion of this energy is expended in overcoming the resistance offered by the air; if, in addition to this, it becomes a ricochet shot and subsequently strikes the body as a "Querschläger," the damage inflicted will be in proportion to the force which it possessed before striking. In any case, however, the damage inflicted will be greater than if the bullet had struck in its long diameter.

The conditions change, however, when the bullet retains its normal force and loses the direction of its long axis only after entering the body. Here the projectile causes extremely destructive effects, tearing along with it, as it were, bone, muscle and portions of the skin.

When it is considered in how many different ways the wounds as shown in these photographs might have been caused in the course of a desperately contested action at short range, in which both high-muzzle-velocity projectiles and shrapnel bullets were used, the difficulties of deciding as to the exact mechanism of their production will be readily appreciated. What with the opportunities afforded for ricochet shots by the projectiles traveling close to the ground as occurs when volleys are delivered and received with the men lying down, the close range at

[1] Ueber die Wirkung und die Kriegschirurgische Bedeutung der neuen Handfeuerwaffen. Berlin, 1894.

which the shots were received, and consequently the greater probability of the ocurrence of the shattering effects of modern rifle projectiles undistorted when the hit takes place, and, finally, the acknowledged fact that shrapnel was used in the same action (see Fig. 8)—all go to render it almost impossible to decide the question as to an infraction of the laws of nations upon the evidence afforded.

Concerning the claim put forward that these wounds were made by dum-dum or soft-tipped bullets, Mr. Clarkin writes as follows: "The picture of the cartridges and distorted bullets secured from wounds in Japanese soldiers seems definite enough, but as yet no rifle has been found on the field of battle, or taken from captured Russian prisoners that fits these cartridges, though we have in the preserve, where the war correspondents are kept, certain hunting rifles that seem to fit the cartridges. Wounds caused by these rifles in animals shot in the woods near-by agree with these pictures, at least in regard to the shattering effects on the tissues."

It is incomprehensible that Russian soldiers should, upon the long and weary marches which immediately preceded the battle of Liao-Yang, have burdened themselves with cartridges that did not fit the regulation arm which they carried. As for the distorted fragments shown in the photographs, which, it is claimed, caused the wounds exhibited, it would be impossible to state, in their present condition, even if the pieces themselves were before us, much less from a photograph, whether or not they ever fitted the cartridge shells in question.

In view of all the circumstances, therefore, it would seem as if the evidence presented in the photographs would scarcely justify the accusation that the Russians, in spite of the sentiment throughout the civilized world against the use of dum-dum bullets, and the declaration that their use was contrary to international rights and humanity by the Hague conference of 1899, had resorted to these forbidden projectiles.

RENAL HEMATURIA OF UNEXPLAINED ORIGIN. REPORT OF A CASE WITH CESSATION AFTER NEPHROTOMY.[1]

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HEMATURIA, as a symptom of renal disease, may be caused by several different affections of the kidney. It most frequently shows itself in cases of calculus and new growth, is not infrequent in tuberculosis, occurs in chronic as well as in acute nephritis, and is sometimes seen in movable kidney. Besides these well recognized cases, there occur others, forming a group, not well defined, but little understood and usually designated by the meaningless terms "idiopathic" and "essential."

During the past one hundred years the views concerning the etiology of the cases in this group have undergone radical changes. Roughly speaking, there have been three periods in the development of our knowledge of such cases, or perhaps one might better say that there have been three epochs, in the course of which the views have been changed, without, however, throwing much light on the underlying cause.

During the first period, the older writers simply classified those cases in which the etiology was obscure as "idiopathic hematuria," referring the cause to such ill-defined and unreliable factors as "exposure to dampness," "catching cold," etc. Thus, Rayer,[1] one of the most brilliant writers of the early part of the last century, in his *Traité des maladies des reins* (1837), a work on kidney diseases in some respects unsurpassed to-day, devotes a whole chapter to the subject, considering idiopathic hematuria not as proven but nevertheless as of common occurrence.

In the following epoch, marked by great activity in the field of histologic pathology, when the attempt was eagerly made to explain all symptoms by reference to pathologic changes, the so-called essential hematuria was lost sight of and it was quite generally held that bleeding from the kidney is always caused by some morbid process.

During the past twenty years, however, these ideas have been again modified, for with the development of renal surgery, permitting the far more frequent examination of the organ presumably diseased, fairly numerous cases were found in which an exploratory nephrotomy, undertaken on account of hematuria, supposedly caused by calculus or tuberculosis, proved disappointing. Nearly every surgeon has had cases presenting bleeding and perhaps pain, has exposed the kidney thought to be at fault and either by needling or by incision, has found nothing whatever to account for the hemorrhage. The kidney has been replaced and in a certain percentage of cases the bleeding has ceased. Such experiences have led to the more or less general belief in the older idea, that renal hematuria can occur, independent of pathological change, and hence our more recent classifications again include a group, variously styled "renal hemophilia," "angioneurotic hematuria," "nephralge hematurique," "renal epistaxis" and "hematuria arising from sound kidneys."

Two different theories have been given prominence in the discussion which has taken place on this subject. The prevailing one is that of Klemperer,[2] who explains the bleeding by supposing that there exists a disturbance of the vasomotors—a paralysis of the vasoconstrictors, causing a dilatation of the blood vessels and a consequent diapedesis of red blood corpuscles—hence the term angioneurotic. Klemperer argues "we have no doubt of the occurence of angio-

1 Read at the annual meeting of the Michigan State Medical Society, at Grand Rapids, May 25 to 27, 1904.

neurotic edema and why should not angioneurotic disturbances take place in the kidney as well as in the skin?"

Senator,[3] on the other hand, presupposes a local hemophilia or a hemophilia confined to one organ. I can find little in the arguments brought forward in support of this idea.

If we admit the possibility of such a cause or causes, the following case observed by the writer in Baltimore, would seem to fall in this group.

Case.—Mrs. J. C., a woman of forty-six years, first consulted me on September 23, 1902. She complained of passing large quantities of blood in the urine and of a persistent backache. The history was briefly as follows: Although never very strong or robust she had had but few illnesses, recalling only an attack of typhoid fever twenty-seven years previously. She had been living in a district where malarial fever prevails but the possibility of her ever having become infected was very carefully excluded. She was the mother of four children and had passed through her marital and menstrual life without mishap.

In May, 1902, five months before the consultation and when in her usual health, she first noticed blood in the urine and began to have a dull backache. At first the hemorrhage was intermittent, but during the summer blood constantly appeared, without much variation in amount. There was no history of sharp attacks of pain and nothing in the patient's account of her illness to point to the source of the hemorrhage, except the fact that the aching had perhaps been a little more severe on the left side. There was no disturbance of micturition and no sediment had been noticed in the urine. Since the onset of the trouble, loss of strength had been marked and there had been a decrease in weight of about six pounds. On physical examination, Mrs. C. was found to be poorly nourished but the color of the mucous membranes was fairly good. The heart and lungs were normal and the pulse, which was 72 to the minute, was of good volume and tension. The abdomen was flat and natural in appearance, with no bulging in the flanks. On palpation there was no resistance and no tenderness. Neither kidney could be felt nor could sensitiveness be elicited in either kidney region or along the course of the ureters.

The blood examination showed 7,000 leucocytes and 65 per cent. of hemoglobin.

Cystoscopic Examination.—With the patient in the dorsal position, a sterile catheter was introduced into the bladder and about 50 c.c. of bloody urine withdrawn. Cultures were made on agar-agar, which subsequently proved to be sterile. The knee-chest position was then assumed and a No. 10 Kelly cystoscope introduced. The bladder walls appeared slightly blood-stained but otherwise normal and the ureteral orifices seemed natural. Renal catheters were then inserted and about 15 c.c. of urine collected from each side, that from the left being intimately mixed with blood, while that from the right was clear. Cultures from both sides proved to be sterile.

Urinary Examination. Mixed Specimen.—Brownish red; specific gravity, 1.022; faintly acid; no sugar; considerable albumin. Abundant granular sediment, consisting of red blood cells and a few epithelial cells; no blood; no casts. *From right kidney.*—Pale yellow; clear; acid; no albumin. Urea 15 grams to the liter. Flocculent precipitate, consisting of phosphates and a few epithelial cells; no blood; no casts. *From left kidney.*—Brownish red; cloudy; neutral; considerable albumin. Urea 15 grams to the liter. Heavy granular precipitate, consisting of blood cells and epithelial cells; no casts. Numerous slides were prepared and stained for the tubercle bacillus, but none were found.

On October 1, three mmg. of tuberculin were injected. There was no reaction. For the next four weeks the patient was kept under observation. During this time, blood was continuously passed and the backache persisted. Specimens from the urine were repeatedly stained and examined for tubercle bacilli but none were ever found. On October 30, the patient was admitted to the Johns Hopkins Hospital, in the service of Dr. Howard Kelly.

As all our means of diagnosis were exhausted without arriving at a conclusion, an exploratory nephrotomy was decided upon and this was done by Dr. Kelly.

Operation.—Before administering the anesthetic, the left ureter was catheterized and the catheter left in place. Ether was then given and with the patient lying over an Edebohls'[4] bag, the kidney was exposed and brought out onto the loin. There were no adhesions and externally the kidney appeared to be perfectly normal. By means of a gravity apparatus attached to the catheter, the pelvis of the kidney was now distended with salt solution and while the assistant controlled the hemorrhage by pressure on the pedicle, a longitudinal incision was made through the cortex in the line advocated by Brödel[5] (just posterior to the posterior border of the kidney; the line, along which the anterior and posterior branches of the renal artery meet and through which an incision severs the fewest possible vessels). The distention of the pelvis and calyces simplified their examination, as it kept the tissues from becoming blood-stained. A most careful search failed to reveal the slightest abnormality, either of the pelvis or the parenchyma. A liberal sized piece of the cortex was removed for microscopic examination, the kidney sutured with through-and-through stitches of fine catgut, replaced and firmly held in position by packing with iodoform gauze.

Convalescence.—The after-history was uneventful. On November 10, I again catheterized the left ureter and found that the kidney was excreting its normal proportion of urine. This

was still blood-tinged but of a much lighter tint than before the nephrotomy. Blood continued in the urine, in decreasing amounts, until November 27, 1902, when it completely disappeared and has not thus far returned. The patient's general condition since the operation has been excellent.

Pathological Report.—Microscopical examination of the tissue removed showed it to be perfectly normal.

We have then, in this case, hematuria, the cause of which remains a complete mystery. There was no bacteriological infection, for the urine was proven to be sterile on two different occasions. Calculus and tuberculosis were carefully excluded. There was no nephroptosis. There were no macroscopical lesions and no microscopical alterations in the portion removed. The bleeding did not cease because of atrophy, consequent upon the operation, as might be conceived, for a subsequent catheterization showed that the kidney was excreting urine in the same amount as before the nephrotomy.

Shall we then say that it was a case of hematuria from an anatomically sound kidney and thus admit that this can occur? With the idea of ascertaining what pathologic evidence there is in favor of the existence of a true idiopathic hematuria, I have examined the literature of the past twenty years. Fairly numerous reports of such cases occur and they may be divided into two groups—(1) those from the medical clinics and (2) those from the surgical clinics. The former are much the more numerous but as the diagnosis rests on negative findings and on the cessation after treatment, without the true condition of the kidney ever having been learned, such reports furnish no scientific evidence.

In order to prove that bleeding comes from a sound kidney, it is necessary to prove (1) that the hemorrhage is renal. This can be done, with certainty, only by the catheterization of the ureters. (2) The kidney must be subjected not only to exposure with palpation, needling or even longitudinal incision, but there must also be a microscopical examination of a portion of the renal tissue. Even when this latter test is applied, it is conceivable that the part of the organ from which no specimen is taken may be diseased and the cause of the hemorrhage.

Excluding movable kidney, I have studied 19 cases reported under one or another of these headings. There are numerous others, as in the list reported by Harris[6], but these I have not included as there are obvious facts given, which might well account for the hemorrhage.

Most of these 19 cases have been cited time and again throughout the literature as proving the existence of hematuria from normal kidneys. Of how much weight is the evidence? They may be divided into two classes: (*a*) Those in which the examination has been macroscopical only; (*b*) Those in which the microscope revealed evidences of interstitial nephritis but which have been reported as cases of idiopathic hematuria because the author either disregarded or was ignorant of the fact that bleeding may occur in chronic nephritis.

That the macroscopical examination alone is insufficient, especially if the kidney is simply exposed and palpated, without an incision through its cortex, is, I think, evident when one considers how frequently are seen at autopsies, kidneys, externally apparently perfectly healthy but on incision found to contain a small stone, a general interstitial inflammation, a focus of tuberculosis, or more rarely a new growth.

In the cases reported by Anderson,[7] Broca[8] and Passet,[9] the kidney was simply exposed and palpated. In those of Durham,[10] Abbe,[11] Legeau,[12], Oliver[13] (case II), Guyon,[14], Loumeau,[15] Harris,[16] Rovsing[17] and Debesaques,[18] the organ was incised and carefully examined but not studied microscopically.

In the other group, microscopical sections were made and areas of interstitial nephritis of varying sizes were found. Such was the case in the reports of Sebatier,[19] Senator,[20] Oliver (Case I), Floderus[21] and McGowan.[22]

After excluding these cases there remain two unexplained, one reported by Klemperer[23] and the other by Schede.[24]

Klemperer's case was that of a male, aged twenty-two years, who had always been healthy and had no hereditary tendencies. A year before coming under Klemperer's observation, he suffered for three months with bloody urine, but this disappeared and he remained free from it for nine months. It then returned and a cystoscopic examination revealed blood coming from the left ureter. Except for the blood, the urine was normal. After the hematuria had continued for four months, nephrectomy was done. The whole kidney was carefully examined by the best authorities and pronounced absolutely normal. Five years later the bleeding had not recurred.

Schede's patient was a man, aged fifty years, who had had hematuria for several months producing marked anemia and baffling all attempts at explanation. After a suprapubic cystotomy the ureters were catheterized, the source of the hemorrhage learned and the kidney removed. It proved to be perfectly normal.

Is our case similar to these or was there a microscopical lesion of some unexamined portion of the kidney? The piece removed for histological study was relatively small and might easily have been from a portion of the parenchyma which was sound. The case was more carefully studied than were most of those cited as examples of idiopathic hematuria and nothing was found to account for the hemorrhage. Still, I would prefer to adopt the view, advocated by Israel[25] and Rovsing,[26] that there was a cause—an undiscovered one—rather than to assert that it is an example of bleeding from an anatomically sound kidney.

In view of the fact that there are thus far on record but two cases which apparently prove that hemorrhage may take place from a kidney which is not the seat of a pathological change, it would seem far better to me to put them aside as yet unexplained, than to admit into our classification a group such as has been mentioned.

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THE PRESIDENT'S INAUGURAL ADDRESS.[1]

BY HENRY S. STEARNS, M.D.,

OF NEW YORK;

VISITING GYNECOLOGIST TO CITY HOSPITAL, CONSULTING SURGEON TO HOSPITAL FOR RUPTURED AND CRIPPLED.

I DESIRE first of all to thank you for and express my sincere appreciation of the honor you have conferred upon me by electing me to the high office of President of our time honored Society, the veteran of all the medical organizations existing in this great city to-day. And through all the many years of its existence, we can see a steady increase in its numbers and in the attendance at its meetings, until last year when our records show a larger average attendance than any of our contemporaries. As I recall the names of those on the list of my honored predecessors, a deep feeling of the responsibility of the office rests upon me, and it is only possible to promise that no effort of mine shall be spared to make the meetings of the coming year as interesting as possible, and to see that our efforts for the welfare of the profession and of the public shall suffer no diminution. Your retiring president has adminstered the office with such signal energy, tact and success, that in vacating the office he leaves the Society in the most flourishing condition it has enjoyed for many years, both as to the number on its roster of members, the largely increased attendance at its meetings, and the importance of the work accomplished by its committees.

The unusually large number of members added to our rolls during the year just ended is most gratifying, and allow me to explain some of the reasons why it is very desirable that this increase should continue until we have enrolled with us as nearly as possible every respectable licensed practitioner in the county. We may certainly with justifiable pride and without a gainsaying voice claim our organization to be the oldest and largest in the city; but to my way of thinking, this is far from being more than a most superficial view. There are so many of us who have the impression that the main function of the Society is to have presented to it once a month scientific papers for our instruction and entertainment and afterwards to have an opportunity for a half hour's social intercourse with our brother practitioners. But although this is an important part of our activities, we should have and do have much higher objects than mere personal benefit. If it were not so, we would be on a plane hardly higher than that of the trades unions. Our work has always been and must, as time goes on, look more and more toward the benefiting of the public where its needs and our acquirements coincide.

Would that I could impress upon all of you more vividly the importance and value to each one of us personally of the work done by your Comitia Minora and other standing committees. Let me emphasize that far the greater part of the work done by the medical profession in this city for the suppression of illegal and criminal practitioners and for the amelioration of conditions inimical to the public health is done by the New York County Medical Society. As you all will admit, the mere inertia of numbers has an enormous effect upon public policy, and therefore certainly the more nearly we include all respectable practitioners among our members, the greater becomes our influence for good in these two important objects. And so I would urge upon you all to persuade your professional friends and acquaintances who are not already members to become so. The effects of a largely increased membership would be promptly evidenced not only by much more efficient results whenever we endeavor to influence the authorities on matters pertaining to the public health, but also by increased consideration for our opinions and recommendations, by the courts and legislature.

To cite an example of this, on the tenth of last month, in the city courts, the maximum fine for the sale of impure milk was imposed on no less than fifty dealers. This was very directly the result of the work of our Milk Commission. Its bringing so forcibly to public notice of the deplorable quality of much of the milk sold in this city, aroused the health authorities to much more energetic action than they had shown for some time. It is doubtful if the Commission would have had anything like this consideration shown it and its recommendations, were it not that it had the backing of this, the largest medical society in the city. Here we have an evidence of the success attending the utilization of the weight of numbers.

Let us examine the other side where our numbers and influence, large as they are, seem still insufficient to obtain results alike important to

[1] Read at stated meeting of the Medical Society of the County of New York, held in the New York Academy of Medicine, Monday, November 28, 1904.

the profession and the public. Instancing this is the unsuccessful attempt of the Legislative Committee of the State Society to obtain from the Legislature the enactment of a new statute defining, more exactly than had been done before and more in accordance with present day needs, what in the courts shall be the interpretation of the term "practice of medicine." Had our numbers been considerably larger, so much weight would not have attached to the representations of the faith curists and others when the bill came up for consideration in committee in the legislature, and from which I believe it never emerged. Again, I ask, can anyone doubt that the larger the number of members we have back of such requests and recommendations to the legislature, the more likely is the profession to obtain the enactment of a statute which will permit of our arresting, fining, and imprisoning imposters appropriating the title "Doctor" to deceive those coming to them for medical advice, no matter whether they merely prescribe or actually give medicine, or some other form of treatment. And also for the punishment of those far more dangerous persons who are actually licensed practitioners but who from the character of their work in performing criminal and illegal operations, are certainly morally criminal to the highest degree, but whom the law at present actually protects to a certain unnecessary degree, by placing so many requirements and restrictions as to the form and manner of having evidence admitted, that it is only with extreme difficulty and at great expense that a conviction can be obtained.

In addition to this moral effect of increased numbers, there will be the very potent advantage to your Board of Censors of having a larger fund to disburse in these prosecutions for the suppression of criminal and illegal practice and quackery. At present and for years past, we have been devoting every dollar of our surplus funds to this end, and you may rest assured that many times our annual appropriation could be used to advantage. After five years' work on the Board of Censors, I feel justified in the assertion that, taking into account our limited funds, we have attained the highest point of efficiency possible in the work accomplished by your Board of Censors and counsel. Do not misunderstand me as saying we are doing all that should be done; in fact, what we are doing is little more than an indication of what we ought to be able to do if we only had the sinews of war. Your counsel is so eager to prosecute this work that hardly a meeting of the Board occurs but he has to be warned that the limit of possible expenditure will be overstepped if he do not lessen the number of prosecutions. It has been asked time and again by the daily press why with thousands of charlatans in the city, and numbers of them openly advertising in the papers, the County Medical Society does not suppress the larger part of them. As already indicated, the answer to this criticism is our lack of funds, not only to defray expenses of a prosecution after an arrest has been made, but also the usually much greater expense involved in the collection of sufficient evidence to obtain an indictment. A larger fund is imperatively needed if we are, even in a moderate degree, to live up to the expectations of the public in this line of work. It has been suggested many times that our prosecutions against offenders are by right the duty of the District Attorney's office; but while this branch of our municipal government gives us a certain amount of encouragement by lending its countenance to our efforts and in addition an occasional very small modicum of actual tangible assistance, nevertheless the main burden of the work devolves upon us, or a prosecution would rarely be started and still more rarely carried through to a conviction.

Besides the lack of sufficient funds for a satisfactorily energetic prosecution of this work, and never in our history have more brilliant results been obtained in our legal department than during the last year, there stands squarely in the way of our success the lack of a statute defining the "practice of medicine" more exactly in accord with the present ideas of the public and the profession than that now in existence. Other States, notably Michigan, are decidedly in advance of us in this particular. Some of the suggested changes which seem particularly worthy of your careful consideration are:

1. Adding a provision to the present law defining more clearly the power of the Regents, to revoke the licenses of physicians for unprofessional conduct and providing for a form of trial before the Regents for the revocation of licenses.

2. A re-registration of physicians. It is a notorious scandal that many quacks are now practising under dead men's diplomas, and with the present medical register of this county containing nearly fifteen thousand names, it is getting to be increasingly difficult to identify practitioners with any given license. There should be inserted a provision in the proposed law requiring a registration with the Secretary of the Medical Society of each county.

3. The regulation of advertisements, following the lines of the Michigan law.

4. The reenactment of a comprehensive definition of what constitutes the practice of medicine similar to the definitions in many states, the idea being to so define the practice of medicine as to make it apply to all those who diagnose and attempt to heal by any method whatsoever.

5. So changing the penalty of practising medicine as to make it a misdemeanor. At present, for the first offense we cannot impose both fine and imprisonment. Neither can a fine be over $250. This ought to be changed so as to make it a misdemeanor, and thereby carry with it a fine up to $1,000 and imprisonment up to one year.

6. Inserting a provision in the medical law requiring all advertising medical concerns to post

on their signs the names of the practitioners and in the office of each practitioner the name of the person so practising. There is a similar provision in the dental law, and there should be one enacted for the medical law.

7. The ambiguity in the present law prohibiting the use of the title doctor should be cleared up. The words "without having legally received a medical degree" should be so worded as to make it certain that the meaning is "without having legally received the medical degree in the State of New York." The use of the title of doctor by barbers, chiropodists, etc., should be distinctly prohibited.

8. The agents of the Medical Society should be made peace officers under the statute, by enabling them to make arrests similar to the powers conferred upon the agents for the New York Society for the Prevention of Cruelty to Children.

9. The repeal of the provision permitting fines to be returned to the Society as a result of prosecutions.

But a united profession in the State is an absolute necessity before we can expect to wield influence enough to convince the legislature that our requests for any such modification of the statute would undoubtedly be for the furtherance of justice and the public welfare. It was hoped that this unity would have materialized ere this, naturally and quickly, through the amalgamation of the two largest medical organizations in the State, viz., the New York State Medical Association and our own New York State Medical Society, for it is the particular province of these two to prevent the invasion of the medical laws and suppress the particular branch of vice under consideration. The union of these two bodies into one compact body could not fail to result in a largely increased influence both with the courts and the legislature, and at the same time allow the appropriation of much larger sums for the work of the legal department.

After so much has been said and written about the origin of the New York State Medical Association over twenty years ago, it would be a waste of time to thrash over that ancient history this evening. But whatever our reasons may have been for the abolition of the Code of Ethics as an integral part of our Constitution and By-Laws, let me say that with one or two exceptions I look upon this venerable and much discussed document as a just exponent of the moral obligations of the physician, and that the further we depart from the spirit of its teachings the lower shall we fall from that high moral plane upon which the practice of our profession should rest. This action of ours, in abolishing the code, has since received the seal of approval by many other States following in our footsteps, and finally two years ago the wisdom of our action was tacitly admitted by the American Medical Association, at its annual meeting, making the code only advisory and not as before obligatory; besides making such internal and external changes as altering the name to "The Principles of Medical Ethics" and abolishing entirely one clause to which we originally took serious objection.

Possibly the following short synopsis of the amalgamation proceedings may be of interest: At the annual meeting of the State Society in January, 1902, a committee of five was appointed to confer with an equal number representing the State Medical Association, for the purpose of formulating a plan which should have for its object the reorganization of the regular profession of the State into a body in affiliation with the American Medical Association. This committee to report at the annual meeting in 1903. On February 7, the Executive Board of the State Association appointed a similar committee, and on March 19 the first joint conference was held. But little of real importance was accomplished during the year in spite of several joint conferences, because the old code was still an integral part of the Constitution and By-Laws of the American Medical Association and therefore binding on the State Association, and at the same time and quite rightly our committee declined positively to subscribe thereto. At the annual meeting of the State Society in 1903, our committee made a full report and was continued.

The deadlock between the two committees continued until on May 7, 1903, the American Medical Association, at its annual meeting held in New Orleans, took radical action and removed the obstacle preventing the unification of the two State organizations by adopting an instrument called "The Principles of Medical Ethics," and in the resolution this document was specifically termed "A Suggestive and Advisory Document." It was also stated in these resolutions that "The Principles of Medical Ethics" have been substituted for the "Code of Medical Ethics." Furthermore, the article in this instrument named "The Duties of Physicians in Regard to Consultations" has only this to say as to with whom we should consult. "The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet the emergencies of disease or accident." Thus the deadlock was broken and on October 1, 1903, the State Association appointed a committee of five "empowered to do whatever was necessary and expedient to bring about a union in a just and equitable manner." Following this, a special meeting of the State Society was called for October 13, 1903. The meeting was held in this hall and by unanimous vote the conference committee was given powers equal to and commensurate with those given by the Association to its committee. This action pledged both sides to abide by whatever was decided by these two committees in joint conference. They met promptly and began their arduous and responsible task. They drew up a modified constitution and by-laws for the State Society and drafted

an act to authorize the consolidation of the Medical Society of the State of New York and the New York State Medical Association. This act was promptly passed by the Senate and Assembly, and was signed by the Governor on January 21, 1904. This act required that all the corporations involved should vote a majority of its members in favor of the consolidation; that is practically the different organizations in the various counties. All of the active county societies met promptly and ratified this action. On properly verified presentation of these actions to the Supreme Court, the latter was authorized by the act to make an order for the consolidation. When, however, this presentation was made, some objection developed from the Onondaga County Association, and the Court decided that the vote in the case of the Association had not been taken in accordance with the State law requiring the notification of individual members where a transfer of property was involved, and in consequence decided not to grant the order for consolidation. This made necessary a change in the By-Laws of the Association, which could only be accomplished by having the alterations presented at an annual meeting and voted on for adoption at the next succeeding annual meeting. As a result, the necessary changes in the By-Laws were offered at the annual meeting of the State Association held here last month, and they can not come up for adoption until the meeting in October, 1905. At the annual meeting of the State Association just held, the following resolutions were offered at the instance of its present president and unanimously carried, viz.:

Resolved, That the unfortunate delay in the efforts of the State Medical organizations to amalgamate, due to no fault of either party, is a source of grievous disappointment to this Association, and

Resolved, That it is the unalterable desire of the New York State Medical Association that harmony and good fellowship should prevail throughout the entire profession of the State, and to that end this Association pledges itself to endeavor to secure the union of the two State organizations until that much desired end shall have been accomplished.

Apparently, however, the accomplishment of the wishes here expressed was hardly aided by the fact that they dismissed their conference committee. But there may result no delay from this cause if a new committee is appointed promptly next fall, and I am glad to be able to inform you that assurances from those high in the counsels of the Association leave small doubt that the same committee will then be reappointed.

In closing this summary of the most recent developments in the efforts for consolidation, there remains only to say that the State Society and all of the active County Societies have absolutely honored all pledges given in joint conference by their committee, and now as far as the County Medical Society is concerned, we can only wait until the Association is able to carry out its part of the agreement. I feel very keenly the sentiment of disappointment over this delay and believe it to be a well-nigh universal one in our Society. If there are any cherishing different feelings, it has not been my fortune to come in contact with them.

And so let us enter on this new year of work with a fixed determination to do all in our power to foster a kindly feeling with our brethren in the Association, that when the amalgamation has been accomplished, there may be no serious internal dissensions, and that we may then present a united front in our combat with vice and in our efforts to obtain from the lawmaking powers changes in the statutes enabling us to proceed more promptly and effectively against charlatans and criminal practitioners.

I take pleasure in announcing the following committees for the year of 1904-05:

Committee on Discipline.—John P. Munn, M.D., Chairman, 18 West Fifty-eighth Street; Edward D. Fisher, M.D., and James D. Newcomb, M.D.

Committee on Hygiene.—Henry G. Piffard, M.D., Chairman, 256 West Fifty-seventh Street; Walter Bensel, M.D., and Smith Ely Jelliffe, M.D.

Committee on Audit.—John C. Minor, M.D., Chairman, 115 West Seventy-third Street; David M. Marvin, M.D., and Cornelius G. Coakley, M.D.

Milk Commission.—Edward K. Dunham, M.D., Chairman, 338 East Twenty-sixth Street; Rowland G. Freeman, M.D., Secretary, 205 East Fifty-seventh Street; Walter Lester Carr, M.D., Henry Dwight Chapin, M.D., Abraham Jacobi, M.D., Alexander Lambert, M.D., William P. Northrup, M.D., William R. Park, M.D., George M. Swift, M.D., Joseph E. Winters, M.D.

HYSTERECTOMY AND THE GENERAL HEALTH.

BY EUGENE COLEMAN SAVIDGE, M.D.,
OF NEW YORK.

WHEN the choice is hysterectomy or death, hysterectomy is the only way to general health. And we should view such an operation in its best phase. The same obligation is upon us as upon the surgeon amputating a hopelessly infected leg. Bound by all the humanities to minister to the mind perturbed as well as saw off the leg, his optimism should dwell upon the mechanical perfection of the artificial limb. He should minify the increased susceptibility to hemorrhage, apoplexy, and the other disabilities following so great a change in the statics of the circulation.

Similarly, all that follows an "only alternative" hysterectomy is not to be weighed with the life it confers. It is worth the price without haggling. But there are cases in which the wisdom of a hysterectomy is debatable. With these latter I shall deal, understanding by a "debatable hysterectomy" the removal of Fallopian

tubes and ovaries, as well as the uterus, in patients who might be restored, more or less completely, by other methods. I distinctly exclude cases of hysterectomy in which a portion of the ovary is retained.

The following will express my convictions on this subject elsewhere recorded:[1]

"My clinic at Roosevelt Hospital ten years ago brought me a large number of patients from whom both ovaries, and frequently the uterus, had been removed by operators in various parts of the world. In some patients ten years had elapsed since the operation. The majority, however, were recent cases. This time corresponds with the highest tide in activity in complete salpingo-oophorectomy; never before, and not since, has like opportunity for postoperative study come to the clinic.

"My conviction grew that a portion at least of ovarian tissue is essential to a woman's well-being. Its entire removal brings psychical and material changes which result in very definite modifications in the nutritive, renal, hepatic, arterial and cardiac functions. These take her out of the gynecological field into that of general medicine, and the connection between cause and effect is lost; but nevertheless the patient's utility and life are thereby curtailed. This conviction is as strong as a conscientious and purposeful study of ten years, with ample opportunity and an open mind, can make it."

These convictions hold notwithstanding the undeniable good wrought by these operations. Hollow cheeks have rounded out and bloomed, pain-bent frames have straightened, and bedridden invalids have been restored to active life by hysterectomy. A mild sensual sense and power of orgasm have been retained. A degree of worldly prosperity has even come in the freedom from menstruation and child-bearing. Indeed, when we consider the enhanced quality of the naval orange from which the reproductive organs have been removed; or the increased beauty and cleanliness of the spayed lily from the florist, or the steady utility of the prepared horse over the restless stallion, or, again, the increased lard production in swine altered for the market, and then return to the contrast between the pain-bent, hemorrhagic invalid, transformed by hysterectomy into the round, well-staunched woman, —capable of a full month's work—we might be pardoned for reaching a superficial, but fatuous, verdict.

Hysterectomy enhances another capacity in a woman by twenty-five per cent. The calculation, as some of my confrères will remember, was made by an aged woman with saintly pose, distributing flowers and tracts in a certain women's ward. Her solicitude for young women without organs led to the discovery that, as a life-long procuress, she was seeking such cases with an avidity equal to that of an ornithologist after his *desiderata*.

Unquestionably, the severer the call for hysterectomy, the longer the suffering before it, the greater the contrasted benefit after it. And as Esau bargained his birthright for creature-comfort, so many of us would willingly quell instant pain at the discount of future good. In certain classes of the community, every "debatable" hysterectomy is such a discount.

The operation discounts effective longevity. For not only are all the circulatory susceptibilities noticed in the case of amputations relatively involved, but there is also a direct physical after-result. There will be noticed a mixed condition of arterial tension, venous engorgement and muscular relaxation, followed later by renal insufficiency. Nearly a decade ago I wrote upon this susceptibility of women with pelvic trouble —"with almost a chronic priapism of the pelvic organs, liver and spleen," as I then called it—to increased vasomotor pressure, and subsequent renal insufficiency. Professor W. H. Thomson, in a recent issue of the *Medical Record*, from quite another field, has reached a like conclusion regarding the order of the conditions; that the increase in blood-pressure precedes and perhaps causes the ensuing Bright's disease; that, possibly, through certain altered vaso-motor relations, adrenalin is liberated in the organism to cause the primary increase of blood pressure. Perhaps changes in the statics of the circulation release the adrenalin, or, as I now advance tentatively, perhaps an analogous super-skill of remaining function—like the acute hearing of the blind, the lip-reading of the deaf—ensues when the reproductive function is suppressed. There must unquestionably be some compensatory relation between foliage and fruit, so to speak, in the human plant.

Or, perhaps, the nerve stumps, acting on the sympathetic system, throw the organism into an unrelievable tension, as a soldier stands at attention before a superior officer. Tension is the physical call for the reproductive act; tension muscular, nervous and psychical, followed by equivalent relaxation.

But whatever the speculative cause, the result is the mixed condition above described, followed by renal insufficiency and a material shortening of life.

There is another side to the question with an equal bearing on effective longevity. Let us leave out of the question the few who have been left by "debatable" hysterectomy obvious physical and nervous wrecks, those with melancholia, those who commit suicide; and take the synthetical view of the vast majority who, superficially, do well, who are improved economical animals during the period of muscular activity, producing more flesh, scrubbing more days in the month, having, generally, a steadier utility in all material departments. Such cases furnish the precise analogue with the navel orange and

[1] Extract from views presented to the Sixth International Congress of Gynecology, Madrid, 1902, through Dr. A. Palmer Dudley.

draught horse. If such patients had neither mind, nor soul, nor future, and could be plucked and utilized at the proper moment, as a vegetable is ripened or a hog is fattened for the market, they would prove hysterectomy to be "the one thing needful," to adapt them to their environment. And as the criminologist has urged the spaying of criminals for the safety of society, so might the sociologist view hysterectomy on all the pauper classes as blessing the individual and immensely conserving national health. View the vast hysterectomy statistics of some of our French confrères in this light, and in the light of the avowed desire for spaying with many of the women of the town—for commercial ends. But even this is debatable, considering the occasional gem from the muck.

Even in these stolid ones of the community, however, may be noticed the following differences after a hysterectomy: a comparatively lusterless eye, a roughened voice and an increased hair growth; a flattening, or a fattening of the breast at glandular expense; an increase of fat, a devitalization, or a defeminization, or a hebetudinization, so to speak; a changing, as from the high-stepper to the cart-horse; from the alertness of the city-bred to the hebetude of province, where nerve stimuli are few and slow and response thereto similar. It is a wiping out of zest, spirit, and pride of port.

These objective results are patent to the superficial observer. Their significance, however, is more difficult reading. We are helped in this reading by the almost spectacular restorations possible in those cases that I have called "the self-obliterated feminine element." These cases, as elsewhere elaborated, represent the gradual stamping out in function of the selective cells of sex in women from twenty-five to forty years, who show diminished menstruation, loss of sensual sense and power of orgasm, with an increase of weight, roughening of skin and voice, and a growing lithemia and hebetude. As a cause, or a result, the obliteration of the feminine element in the individual almost rivals the work of the knife in its completeness. Note that in these cases the navel orange, draught horse, lard-producing analogy and capacity are not lost. But what goes is, reproductive capacity, spirit, initiative, outlook—in other words, the "house of the mind," without which there can be no effective longevity.

It is only to those color-blind to the possibilities of female life, aside from reproduction, that these matters will seem unimportant. For efficient longevity is entirely a class matter. There can be none of it after the time of muscular activity with those falling in my biological classification.

Less far afield may seem the question of modified conjugal destiny by hysterectomy, and the bearing of thwarted destiny upon health and spirit. Again, it is easy to realize the bearing on life-conduct, thrift, future-planning and morality, of a knowledge to a woman that she is hopelessly barren. The special psychology of a woman gives great possibilities for anguish here. She may have avoided children until she realizes her barrenness, then maternity becomes the sole yearning of her life. (This is so well shown in the converse found in one of the writer's cases, where, after six years of supervision, sterility was overcome, to the patient's great joy. Returning from a brief vacation in Europe I found her bleeding from an abortion procured during a sudden change of desire—the impulse of the moment outweighted the yearning of years.) Although sterility may persist without hysterectomy, the sustaining quality of hope remains. That any one to whom the physical destinies of a human being are entrusted should ignore so important a value, seems as strange as the limitation of the color-blind.

This is why our subject demands not only the separation of the "only alternative" from the "debatable" hysterectomies, but also the consideration of the class of patients operated upon. I am almost tempted to add that the surgeons themselves have varied ranges of vision.

And right here may be struck what I now call —at the recognized risk of being called fanciful —a distinctively American note in gynecology. I make bold to dogmatize that there is a necessity for a marked difference in deduction and procedure in dealing with American women. The point is as subtle as an instinct, but I think I can reason up to it.

Our gynecological statistics are made up from hospital work in congested centers, or are imported from Europe. Tenement house experience and statistics from European peasantry are reliable enough on the "navel orange, draught horse, lard-making classes," but absolutely incomplete with regard to the women of the so-called "plain people" of America, however lowly their station. While those nearer the top of the social fabric in all countries show fewer variations, the distinguishing difference between an American woman of humble station, and even an English woman correspondingly placed, is this: The American woman has a more highly-evolved nervous sytem, with its accompanying nervous vitality. If you question it, contrast an American farmer's wife whose son may be President in her hopes, with an English butler's wife, who is resigned and content in training posterity for similar station. The difference in the American woman has grown principally from an inherited perception of the chance to rise. Knowledge of opportunity has stimulated search for it, and from this has been manufactured—out of European material, it is true—that restless, alert, aspiring nervous system, with its initiative, which has had such a bearing upon our national life. It is a nervous system, difference, a spirit difference, which the ethnologist can spot instantly in a cosmopolitan gathering.

Here is where "debatable" hysterectomy works most harm, and where we get the sharpest contrast. I place the matter far above sensuality or brothel effect. For that energy brewing in a woman's mind, in many a cabin in the wilds, has been potentially the success which the world sees a generation later in the great centers. She may even have borne her last child, and be thenceforward sterile; she may appear restricted and unembellished, as she comes up to the great man of the city for his *ipse dixit*—nevertheless the American woman is not the same as the clinic woman. As a class, she has latent capacities and a promise of effective longevity that we jeopardize by the "debatable" hysterectomy, with its spirit-robbing, pride-abasing, zest-exhausting, devitalizing results.

And this is my "American idea" in modern gynecology.

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AN ANALYSIS OF TWENTY-FIVE CASES OF STRANGULATED HERNIA TREATED BY OPERATION.[1]

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IN 115 operations for inguinal and femoral hernia I have had 25 cases of strangulated hernia requiring operation. Care has been taken not to include simple incarcerated hernia, but only those cases in which the intestine was not only incarcerated but the circulation of blood was so obstructed as seriously to threaten, and in several cases to destroy, the integrity of the intestine.

As to variety, five were femoral and 20 were oblique inguinal. Twenty-three were on the right side—only two on the left. Hernias are much more common on the right than on the left side. In my list of 104 inguinal hernias, 69 were on the right and 35 were on the left side. Of 11 femoral hernias, nine were on the right and only two on the left side, but when we consider the 25 cases of strangulation we find all (5) the femoral, and 18 of the 20 inguinal hernias on the right side. It would seem from these few statistics that strangulation is more apt to occur in the right than in the left-sided hernia. I had no case of strangulated direct inguinal hernia. According to the relation of the hernia to the peritoneum there were 11 congenital, the funicular process remaining open, six acquired and one of the infantile variety in 18 cases, seven not being considered—the five femoral hernias and two inguinal in which the variety was not stated in my notes. The case of anatomically infantile hernia is the only case I have seen. The patient, No. 6 in the table, was a hard drinker, and had had a hernia all his life. On incising the coverings of the hernia, three distinct layers of peritoneum were divided before reaching the intestine—the first two layers forming a pouch above, which was continuous below with the tunica vaginalis testis.

These statistics would indicate that congenital is about twice as apt to become strangulated as acquired inguinal hernia. There were two cases of properitoneal or interstitial hernia—cases Nos. 15 and 24 in the table. In No. 15, a boy thirteen years old, the hernia consisted of a mass of gangrenous omentum tightly wedged in between the transversalis muscle and transversalis fascia above the internal ring. The funicular process was open. No. 24 was a youth, aged eighteen years, who stated that the hernia had suddenly appeared about forty-one hours before he was operated on. About three inches of small intestine were found wedged in between the transversalis fascia and transversalis muscle, and slightly protruding through the external ring. These are the only cases of interstitial hernia I have seen in 104 inguinal operations. Coley reports only seven cases in 937 operations.

Only one of my cases, No. 14, was complicated with an undescended testicle. My youngest patient was six weeks, and the oldest seventy-seven years old. Four patients were between ten and twenty years of age; two between twenty and thirty; four between thirty and forty; five between forty and fifty; three between fifty and sixty; two between sixty and seventy, and four patients between seventy and eighty years of age. The ages of the fatal cases were as follows: Two seventy-seven, one each sixty, fifty-two, fifty-one and forty-one years old.

Site of Constriction.—Often it is impossible to determine the exact point between the internal and external rings which causes the strangulation and sometimes it seems to be caused by constriction exerted along the entire inguinal canal. In sixteen cases in which I was able to determine definitely the point of greatest constriction, in eight cases it was at the external ring, in seven cases at the internal ring, and in one case in the abdominal cavity—probably volvulus (Case No. 8).

Contents of Sac.—In the large majority of cases (19) the sac contained small intestine alone, and in every instance in which small intestine was found in the sac and the portion identified—11 in number—it was found to be ileum. In one case the contents were two loops of small intestine (Case No. 18); in one, small intestine and omentum; in one, small intestine and undescended testis; in one, large and small intestine and omentum; in one, large intestine (sigmoid flexure) only; and in two, omentum only. In 11 cases dark or turbid fluid—sometimes blood clots—was found, and in these cases strangulation had existed from two hours to ninety-six hours; in eight cases over six hours, and in only three cases less than six hours.

Venous thrombosis is the mesentery, ecchymosis, or hematoma of the intestinal wall or mesentery were found in 10 cases, and while it

[1] Read at the meeting of the Medical Society of Virginia, October 18 to 21, 1904.

is admitted that venous thrombi may be caused by constriction alone, yet it is believed that they are caused most frequently by taxis. In two cases the intestinal wall was rough and bruised, and in one a large hematoma was found in the intestinal wall, and was treated by incision evacuation and suture.

In nine cases the contents of the sac were gangrenous, three of the omentum only, and six of the intestine, and in four of these there was what is usually called general peritonitis.

In the gangrenous cases the time during which strangulation had existed was as follows:

In one case, thirteen days; in one, nine days; in two, four days; in two, three days; in two, one day; in one, four hours. In the last case the gangrene was probably caused by volvulus in the abdominal cavity—there was not sufficient constriction at the rings or in the sac to cause such a complete strangulation—Case No. 8.

Symptoms.—Besides the physical signs the two most valuable symptoms of strangulated hernia are *pain* and *vomiting*. Pain existed in every one of my cases, but it varied in character, duration and locality. It is often described as sickening, sometimes as griping, and usually lasts until the constriction is relieved or gangrene sets in. While usually felt most severely in the neck or immediate vicinity of the hernia, the pain may be general in the abdomen or the point of maximum intensity may be quite distant from the hernia. In Case No. 13, a right strangulated femoral hernia, the patient complained of most pain in the left hypochondriac region, and for sometime could not be persuaded that the pain came from a small swelling so far away, which was just a little tender, and which he had had off and on for thirty years, so that twenty-four hours of valuable time were lost, and a gangrenous bowel was the result.

Vomiting occurred in 20 of the 25 cases, nausea without vomiting in two, and neither nausea nor vomiting in three. In four cases the so-called stercoraceous vomiting occurred—that is, the contents of the small intestine were ejected, and as would be expected, strangulation had existed a long time—in two cases, four days; in one, nine days, and in one, thirteen days. The last two cases ended fatally.

Complete notes of the pulse and temperature were not kept, but enough was seen to justify the conclusion that they are unreliable as affording evidence of the condition of the bowel. For example, in Case No. 9, after strangulation had existed nine days, the pulse was 68 and temperature 96° F., whereas in Case No. 11, after strangulation had existed for the same length of time the pulse was 120 and temperature 98.6° F.

Treatment.—Taxis was not advised nor practised, except when insisted on by the patient after having the dangers pointed out. The danger of returning a bruised, ruptured or gangrenous intestine or omentum, or a loop of intestine with the constriction unrelieved is not to be compared with the safety of an open incision with inspection of the contents of the sac so that they may be dealt with according to the conditions found. Occasionally patients are seen who prefer death to an operation, as in one of my cases, an old lady, with a strangulated femoral hernia. The probable happy outcome of an operation and the inevitable fatal result without an operation were explained to her, but she deliberately preferred to die, and did so within a week.

In all of my cases, except three, after attending to the contents of the hernial sac, some operation for radical cure was performed. Of the three exceptions, two were cases of peritonitis, in which it was thought best to provide for drainage, and the third did not survive the operation. After examination of the hernia, with sufficient gentle manipulation to determine its condition, the operation is performed.

In inguinal hernia an incision is made as in Bassini's operation for radical cure, exposing well the external abdominal ring and the upper part of the hernial sac. The sac is then opened and the contents examined, after which the aponeurosis of the external oblique is slit up, opening the inguinal canal, and thereby relieving the constriction, unless it is situated at the internal ring or in the abdominal cavity. The contents of the sac are then treated according to circumstances. All constriction having been relieved the intestine is pulled down until the effect of the constriction on the bowel can be seen, as the pressure at this point is sometimes so great as to cause an indentation with damage to the bowel or even a perforation, especially in femoral hernia. If the intestine is of doubtful vitality it is covered with cloths and kept wet with physiological salt solution for from fifteen to thirty minutes. If the circulation returns, as shown by the red color, the bowel is restored to the peritoneal cavity, but if the circulation fails to return, resection is at once performed and the ends of the bowel reunited with sutures or button. A few gangrenous spots limited to small areas may be treated by turning them in with sutures or by telescoping a portion of the bowel, so as to cover and reinforce the damaged part and fixing with sutures.

The formation of an artificial anus with or without resection of the intestine must not be done in any case in which the patient's condition will permit resection with immediate reunion, since Gibson's statistics show a mortality from the former, just double that which results from the latter operation. In every case in which the patient's condition will permit an operation for the radical cure is performed.

In femoral hernia the incision is made from above downward and inward, crossing Poupart's ligament at an angle of about 45 degrees, and extending over the hernia. Poupart's ligament is divided whenever it is found necessary to do

so. The subsequent steps so far as treatment of the hernia is concerned correspond with those already given for inguinal hernia. As far as I have been able to ascertain, the results of the operation for radical cure in strangulated cases are as satisfactory in every way as those performed at other times.

Mortality.—There were six deaths in 25 operations: *Case 6* was a hard drinker, had a fatty liver and died of delirium tremens on the fifth day after operation. *Case 7* was a woman, aged seventy-seven years, who had suffered from strangulation thirteen days, and had an incipient general peritonitis when the gangrenous intestine was resected. She died of peritonitis forty-eight hours after operation. *Case 9* was a man, fifty-one years old, who had had a right inguinal hernia about forty years, but he stated that he had not been troubled with it for more than a year. At the time of operation he had been suffering with intestinal obstruction nine days, and was very weak. No sign of hernia could be found by examination externally, but laparotomy revealed a knuckle of ileum which was little more than a Richter's hernia, having entered the internal abdominal ring just far enough to produce complete obstruction and become strangulated. The patient died on the table apparently from exhaustion as soon as the hernia was reduced. An interesting phenomenon in the form of dynamic ileus was observed in this case—the intestine for fully 10 inches below the strangulated portion being contracted into a small cord completely obliterating the lumen so that water would not run through. There seemed to be a tonic contraction of the circular muscular fibers which remained in that condition after the specimen had been removed from the body and placed in preserving fluid. *Case 11* was a woman with a right femoral hernia which had been strangulated nine days and general peritonitis had set in. The gangrenous intestine was resected and a Murphy button used, but death occurred fourteen days later from peritonitis. *Case 13* was a man, aged sixty years, whose death was caused probably by his own obstinacy in not permitting an operation sooner. He had gangrene of the intestine from three days of strangulation with numerous mesenteric thrombi and beginning general peritonitis. Nineteen inches of intestine were resected, but death occurred four days later. Necropsy showed general peritonitis and gangrene of three feet more of intestine. There may have been an arterial embolism in this case.

Case 22 was a feeble man, aged 77 years, inmate of an insane asylum, who had had strangulation of a right oblique inguinal hernia for eight hours, and had been treated by taxis. Three feet of ileum, almost black, were found in the sac, with numerous large thrombi in the mesentery. Death occurred on the fourth day from toxemia or exhaustion. No peritonitis.

There were six cases of resection of gangrenous intestine, with three deaths, all from general peritonitis, which existed at the time of operation.

Reviewing the histories of these fatal cases it is almost certain that with one exception, Case 6, a timely operation would have saved the life of every one of the patients. It may be of interest to show the mortality (1) in general, (2) when gangrene or general peritonitis was not present, and (3) when gangrene or peritonitis was present.

Operations for strangulated heria, 25; deaths, 6; mortality, 24 per cent.

Cases in which the contents of the sac were in good condition (though some of these had thrombi in the veins and damage to the intestine), 16; deaths, 3; mortality, 18.75 per cent.

Cases in which the contents of the sac were gangrenous or general peritonitis existed at time of operation, 9; deaths, 3; mortality, 33 1-3 per cent. Six of these cases were resection of gangrenous intestine and three of removal of gangrenous omentum.

At Johns Hopkins Hospital from 1889 to 1899, there were 64 operations for strangulated hernia, with 19 deaths, a mortality of 29.68 per cent.

Cases in which the contents of the sac were in good condition, 48; deaths, 4; mortality, 8 per cent.

Cases in which the contents of the sac were gangrenous or general peritonitis existed at the time of operation, 16; deaths, 15; mortality, 93.75 per cent.

Erdmann reports 8 operations for gangrenous intestine or omentum, with 4 deaths; a mortality of 50 per cent. Six of these were resection of the intestines, with two deaths; one removal of gangrenous omentum, with one death, and one formation of artificial anum, with one death.

Horwitz reports 43 operations for strangulated hernia, with 15 deaths; a mortality of 34.88 per cent. Three of these were resections of gangrenous intestines, with two deaths; mortality, 66.66 per cent.

Coley reports in 1,063 operations for hernia, 17 operations for strangulation, with two deaths. One resection of gangrenous intestine resulted fatally.

Gibson collected from the literature, from 1888 to 1898, 226 resections of gangrenous intestine, with immediate reunion, having a mortality of only 26 per cent., and in 63 cases in which the Murphy button was used, the mortality was even less, only 22 per cent.

This is a much smaller mortality than that of any of the operators here quoted, and is probably a little more favorable than would be the statistics of *all* cases operated on, were it possible to collect them. It is well known that the successful is much more apt to report his cases than the unsuccessful operator, so that many failures are never heard of, whose sum total added to those published would materially increase the mortality. This is true of operations for other troubles beside strangulated hernia.

THE SIGNIFICANCE OF PUS IN THE NOSE, WITH SPECIAL REFERENCE TO THE AFFECTIONS OF THE ACCESSORY SINUSES AND THEIR PROPER TREATMENT.[1]

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UNTIL within a comparatively short time accurate diagnosis of the affections of the accessory sinuses of the nose has been unknown. With the development of nasal surgery as a specialty by itself came the more thorough study of the anatomy of the air spaces of the head, and finally the working out of a new pathology and a rational treatment for the affections of these sinuses, which are responsible for many a headache, and many a pain, and many a nasal discharge which were formerly classed under the vague heading of neuralgia or catarrh.

The treatment of these affections has grown from a mild conservatism to an extreme radicalism, and is at the present time still in a transition stage. The last word or the final treatment in regard to them has not yet been settled upon.

The accessory sinuses of the nose consist of the large maxillary antra, one on each side; the two frontal sinuses; two sphenoid sinuses, and the anterior and posterior ethmoid cells. They are all continuous with the mucous membrane of the nose, covered with a thin layer of mucoperiosteum, have ciliated epithelium, and comparatively few mucous glands. The frontal sinus mucous membrane is said to have none. They are very irregular in shape, practically invisible under normal conditions by rhinoscopic examination, and the diagnosis of their affections presents some difficulty.

The maxillary antrum is the largest cavity, lying in the upper jaw, opening into the nose. On the nasal side it is covered over with portions of the ethmoid bone and the inferior turbinate, and has a small, natural opening into the middle meatus of the nose at about its middle third and very near the highest portion of the nasal wall of the cavity. This opening is 2 to 6 mm. in its vertical, and 3 to 18 mm. in its anteroposterior diameter. Opposite this and behind the natural outlet, there are frequently one or more accessory openings. The outlet of these openings is in the hiatus semilunaris, a crescent-shaped opening formed above by the bulla of the ethmoid, and below by a sharp process called the processus uncinatus. Internal to this, and practically a part of it, is another space called the infundibulum, into which opens the outlet from the frontal sinus, the frontonasal canal. The average size of the antrum is 1¼ inches in its anteroposterior diameter, 1¼ inches vertically, and one inch in width. It is subject, however, to extreme variations in size, and is frequently very different in formation on the two sides of the face. With a high arched palate the antrum is long and narrow. With a sinking in of the canine fossa it becomes much shallower. On its outer wall it is thin and the outer portion of its inferior wall is in close relationship to the roots of the first and second molars and the first and second bicuspids. The roots of these teeth frequently project into the antrum, and indeed the first ideas of antral pathology came from the hands of the dentists, who occasionally found, after removal of teeth, that the antrum contained pus; and our first belief in regard to this subject was that antral suppuration was always of dental origin and the treatment should be by an opening through a tooth root or through the alveolar process.

The floor of the antrum is somewhat irregular. It may be on a level with the floor of the nose. It is frequently lower. The thickness of the bone over the tooth roots varies greatly, being thinnest over the first and second molar teeth. The second bicuspid and the first and second molars have a pretty constant relation to the antrum, the first molar being usually certain as to relation. In entering the antrum, however, in this way, the proper angle of insertion of the tooth must be carefully followed; otherwise in antra of extreme variation from type it is possible to puncture either the floor of the nose or cheek wall instead of the antrum itself.

The maxillary sinus is constantly present. At birth it is a slit with a vertical diameter of 3 mm., transverse of 2 mm., anteroposterior of 7 mm. There is no maxillary sinus beneath the orbit at this time. Later cancellous bone forms between the floor of the orbit and the alveolar process of the jaw, and the antrum is complete at twenty-five years of age, the floor of the orbit being the roof of the antrum. In the roof of the antral cavity lies the infra-orbital canal, transmitting the superior maxillary nerve and the infra-orbital vessels. An occasional defect in this wall may cause pain in connection with antral suppuration. The position of the infra-orbital nerve has especially to be borne in mind in radical operations.

The frontal sinuses are two large cavities in the frontal bone beginning just above the roof of the nose and extending laterally over the roof of the orbit, going half-way up the forehead to the superciliary line and extending about 1¼ inches downwardly. These dimensions vary very greatly, so much so that any average dimension is of little value.

There is always an opening at the most dependent portion down into the nose through what is called the fronto-nasal duct, opening usually into the infundibulum, sometimes in the hiatus semilunaris, occasionally opening directly down into the nose independent of the infundibulum, but always underneath the anterior end of the middle turbinate. The practical import of this is that sec-

[1] Presented before the Buffalo Academy of Medicine, March 28, 1904.

ondary infection from antrum suppuration is possible; the frontal sinus on account of the frontonasal canal draining into the hiatus, and also the converse where the drainage of the pus through the hiatus may infect the antrum.

The frontonasal duct varies from a mere slit to one 7 by 8 mm. in size, the average diameter being 4 by 3 mm.

There is almost always a septum between the two sinuses; indeed, Logan Turner says he has never found it absent in the normal skull. Other observers say that it may be absent. There may be a defect of this septum even though the two sinuses do not communicate, the two lining membranes completely closing this defect. In case of empyema of one side there is liability of infection of the other. I have had one such case of bony defect in the septum wall in which one sinus apparently infected the other, though the lining membranes of each sinus were apparently intact. The natural outlet is not visible in the nose on account of the frontonasal duct, the infundibulum and the hiatus being practically covered by the anterior end of the middle turbinate, so that probing and syringing of this cavity is always difficult in the normal nose, and may be impossible until the middle turbinal or its anterior portion is removed. The condition in life with swollen tissues is in marked contrast with the dried specimens, the mucous membrane of which is entirely absent, as it is comparatively easy in the dried specimen to carry a probe into the frontal sinus even with the middle turbinal in position.

The septum of the frontal sinus is usually in a medial plane, but may be to one side or the other, so that it is possible to open the wrong cavity when operating through the anterior wall; but no matter how oblique this division line may be placed above at the lower end and immediately above the root of the nose, the line is usually mesially placed. Occasionally the sinus extends over the entire root of the orbit.

The floor of the frontal sinus is in close relation to the anterior ethmoid cells. The lining membrane of the sinus is slate in color, while the dura, on the other hand, has a white appearance. The outer table is from 3 to 5 mm. thick and if on chiseling, one goes much deeper than that without finding the sinus, he should begin to think either that the sinus is obliterated or that the dura may be the next structure which will be met.

The frontal sinus does not usually appear until about the age of puberty, though signs of development are evident earlier, and develops from two centers of ossification.

The anterior ethmoidal cells vary in number and position from four to six or eight or more, also in size; are in close relation to the roof of the orbit; open, as a rule, into the middle meatus, frontonasal duct, or the infundibulum, but may open directly into the cavity of the nose; are subject to the same inflammatory affections as the other sinuses and are sometimes opened or probed by mistake, the operator thinking he is on the way to the frontal. The posterior ethmoidal cells are fewer in number and open into the superior meatus. These openings are not visible in the living subject, and there is usually a thicker bony division line between the anterior and posterior cells than between the individual cells themselves. Pus in these cavities is quite likely to drain backwards and appear as a sticky mass, more or less dry, on the pharynx wall.

The sphenoidal sinuses, two in number, lie in the body of the sphenoid bone, and vary greatly in size, frequently being very large; have their natural outlet vertically, with their thinnest wall anteriorly, and are reached by following along the septum about the middle of the middle turbinate, and feeling for the same with a probe. A probe passed along this line of the middle turbinal as far as it will reach, the point then depressed to the floor of the nose, would pass directly into the sphenoid cavity.

Here, then, is a complicated spongy network of bone with thin walls all lined with mucous membrane, varying somewhat in the quantity of its mucous glands; subject to inflammatory action, influenced by the swelling of the three turbinal bones which interfere more or less with the natural drainage, and the subject of inflammatory action causing bone pressure, headache and the discharge of mucous and pus.

Given then a pus discharge in the nose, how shall we locate its place? We will see what are the symptoms of inflammation in the individual cavity, and then see if with the picture of the inflammation of each individual place in our mind, we can, in the presence of actual pus, make a sufficiently accurate diagnosis, although it may be said here that an affection of one of these, absolutely independent of that of any other, is comparatively seldom, and it now and then happens that the entire spongy network is simultaneously affected.

ACUTE INFLAMMATIONS OF THE ANTRUM.—The acute type begins with a simple serous inflammation, co-existing with, or the result of, some general inflammatory condition in the turbinates or ethmoid, whereby the natural openings are closed and the outward drainage for a time interfered with. This inflammation later becomes mucous, mucopurulent, or, if it lasts long enough, distinctly purulent.

Influenza, acute exanthemata, operative procedures in the nose, requiring the tamponing of the nasal cavity, head colds, intensified by deflected septa, spurs, enlarged middle turbinates, polypi, or any other local pathological condition interfering with drainage are the principal causes. In spite of the fact that the natural drainage point of the antrum is very much higher than its floor, acute inflammations commonly tend toward recovery, as, owing to the shifting position of the body, especially in sleep, plus the aid of capillarity, drainage is brought about. The blowing of the nose, causing negative air pressure, also favors the removal of the material. The larger the nat-

ural opening, the more rapid the healing. Influenza has been regarded as one of the most frequent causes, yet Fraenkel demonstrated the presence of the influenza bacillus only once in thirty cases. It is probable that in most cases of acute rhinitis there is more or less co-existing inflammation of accessory sinuses which accounts in a measure for the slow healing.

The symptoms are those of pain in the affected side, headache, tenderness on pressure in the canine fossa, a swollen nasal passage with a mucous or mucopurulent discharge. While one-sided as a rule, it is not impossible for both sides to be affected at once. The pain may be that of dull pressure referred to various portions of the affected side of the face and head or sharply located. In cases of dental origin the pain may be referred to the region of the affected tooth. It is my own experience that acute cases of dental origin are comparatively rare. Neither the location of the pain nor its character of necessity definitely locates the trouble. In some cases the pain is very severe and is relieved only by the discharge of mucous or muco pus. Acute inflammations tend to recover and only occasionally become chronic: when they do become chronic it is doubtless due to some interference with the natural drainage.

The treatment consists of general measures directed to the cause, the relief of the pain, douching and syringing with warm salines to favor the discharge, careful examination of the nose, and, whenever possible, the correction of any interference with natural drainage and the hunting for the natural and accessory openings. Washing out through the natural orifice is recommended by many writers, and Curtis says it can be done in three cases out of ten with the Hartmann canula passed ½ cm. from the vestibule. I have not personally been very successful either in finding the natural opening or in washing it out, and have found it much easier and no more painful to puncture underneath the anterior third of the inferior turbinate at the highest point possible, using a curved canula with beveled edge point. This method is quite as rapid and invariably gives one definite information, though one negative puncture is not conclusive evidence that the antrum is not diseased. When the space underneath the inferior turbinate is thoroughly cocainized, with the addition of some adrenalin, the puncture can be made either with the light blow of a hammer or often with the muscular force of the hand, with very little difficulty and practically without pain. The cavity can then be syringed out with warm saline solution, relieving at once the tension and pain and rendering the other measures locally and generally of much more immediate effect.

The ordinary acute case which is seen at the purulent stage will last under this form of treatment from one to two weeks. I am in the habit of syringing out the cavity daily or every other day. A small silver Eustachian catheter easily maintains the opening made by the canula. If it does not, enlarge with a curette. Should the pain disappear and the discharge continue for weeks and be purulent in character, the condition becomes one of chronic empyema. Most cases of chronic inflammation, however, are brought to the physician's attention after they have lasted a long time and arise from two main causes, namely: disease of the teeth, or a primary purulent inflammation of the antrum due to obstructon of the natural outlet, to injuries as traumatism, to the entrance of micro-organisms or to infection from the ethmoid or frontal sinuses. It is probable that the two main causes are about equal in the number of cases which they produce, although some writers lay more to one cause and some more to the other. The varying virulence of the bacteria and the individual predisposition of the individual seem to be the principal factors in deciding whether an acute inflammation heals in the one case or becomes chronic in the other. The form of inflammation is purulent or mucopurulent, sometimes cystic. The micro-organisms found are the *Bacterium coli commune, Bacillus pyogenes fœtidus, Diplococcus lanceolatus,* aspergilli, tubercle bacilli.

The cases of dental origin arise as a result of diseased root processes, especially when the distance between the roots of the teeth and the floor of the antrum is very short. Not infrequently no complaint will be made of the teeth, or it will be reported that they have been filled or have given trouble a long time ago; they may often be apparently sound. Modern dentistry, in its endeavor to save teeth by capping and various methods, not infrequently allows teeth that were better removed to remain in the alveolar process. I have had cases of dental origin which seemed to me to have their cause in capped teeth; others in which no complaint whatever was made of the teeth. In one case an obstinate empyema of the antrum was treated for a long time with daily washings through a tube passed underneath the inferior turbinate. Improvement repeatedly took place, but as soon as the washings were discontinued, the discharge of pus again became foul. No complaint was made of the teeth, but afterward the first bicuspid was extracted, when it was discovered that the alveolar process immediately around the deeper portion of the root was carious. The curette was easily passed into the antrum, all the diseased bone removed, and recovery promptly followed.

The explanation of the lack of symptoms is to be found in the fact that so long as nature has an outlet, she seldom sets up much pain. This is true in those cases of nasal as well as dental origin. Patients will not usually complain of pain but of a unilateral foul discharge. Wherever the teeth are thought to be the cause, the extraction of the teeth and the drilling out of the root cavity will usually determine whether this is or is not the case.

The patients with empyema of the antrum seek

relief either for catarrh, which they say affects one side only, or from the stopping up of the nose and the growth of polypi, due probably to the discharge of pus from the natural outlet (though the polypi may have another cause themselves and be the cause rather than the result of the antral suppuration), or from the constant discharge of foul pus from one side. Obstruction to breathing may be present, with hypertrophy of the mucous membrane of the middle turbinate and of the inferior turbinate. One-sided eczema of the anterior naris is frequent, together with disturbance of the sense of smell, a peculiar odor sense taking its place. This is due to swelling and partial closure of the olfactory fissure.

DIAGNOSIS OF CHRONIC ANTRUM SUPPURATION.—As pus appearing in the middle meatus can come from several sources, the question of diagnosis may present some difficulty. On examining the nose with a speculum, white, creamy looking pus will probably be seen in the front of the nose and around the lower border of the middle turbinate. Wipe this away and notice whether it quickly reforms. After it is cleansed thoroughly, lay the head over toward the opposite side, and after a few moments examine again. If pus is still present and underneath the middle portion of the middle turbinate, it is probably of antral origin, as pus from the frontal sinus or ethmoidal cells will be high up or nearer forward, nearer the infundibulum, and rather in front of the middle turbinate. The pus tends to come forward when the individual is in an upright position, while at night it flows into the nasopharynx, and in the morning is found more or less dry on the nasopharyngeal wall. This diagnosis is only presumptive and not absolute. Several examinations may be necessary, as pus may not appear in the nose at the time of the first examination. An absolute diagnosis can be made only by puncture either through the floor of the nose or through the canine fossa, or by the extraction of a tooth. The history of the case will help somewhat in determining whether it is of dental or nasal origin. By lifting the cheek with the retractor or with the finger, and thoroughly cocainizing the mucous membrane of the canine fossa directly over the second bicuspid or first molar, a good-sized canula can easily be driven with a light blow directly into the antrum cavity, or the ordinary dental drill will quickly make an opening. Warm sterile water is then syringed through the cavity, when, if pus appears at the nasal outlet, the diagnosis is positive. A positive diagnosis can also be made by puncturing the nasal wall in the manner to be described.

Transillumination with an electric lamp placed in the mouth has some diagnostic value. In case one antrum is occluded, the shadow on this side will be very much darker and may even be absent altogether. The information which transillumination gives is corroborative only and not of itself absolutely diagnostic on account of the varying thickness of antrum walls and the possible variation between the two sides. It case polypi are present they should be removed as thoroughly as possible. The prognosis must always have an element of doubt about it, inasmuch as if the condition has lasted any length of time, various accessory ethmoid cells may be involved or the frontal sinus. If the entire pus infected area can be removed or gotten into good condition, a cure will result. Where the antrum alone is involved, the prognosis is always good. The odor of the pus is no guide to the prognosis, as long-continued cases may clear up under favorable conditions. The character of the interior of the antrum has more to do with the prognosis than has the question of odor.

Treatment.—In a cavity like the antrum it is necessary, for rapid and complete recovery, to have good drainage. If there is reasonable probability that the purulent condition of the antrum is of dental origin, the offending tooth should be extracted, the opening through the alveolar process enlarged with drill and curette until the cavity can be freely syringed, and the cavity then packed with strips of gauze and syringed daily until recovery takes place. If the pus still continues after a reasonable length of time, it is evidence that the cavity of the antrum is itself involved in the diseased process and in that case it is better to do the radical operation about to be described.

In making the preliminary puncture under the anterior end of the inferior turbinate, whether for diagnosis or for treatment, some details are to be borne in mind. The point of puncture should be just behind the anterior portion of the middle third of the inferior turbinate. Cocainize thoroughly with 20 per cent. cocaine and adrenal solution, carry the point of the trocar to the proper place, and as high up as possible underneath the turbinate, and not on the floor of the nose, where the antral wall is much thicker. Either a straight or a curved canula with a trocar or a sharp beveled edge canula, straight or curved, without trocar, can be used. After finding the point for puncture, carry the canula against the outer edge of the septum so as to pierce the antral wall at as nearly right angles as possible. Hold it firmly with the fingers of the left hand, and tap lightly on its end with the mallet. After one or two light taps with the mallet, it will be felt to enter the antrum, the giving way of the sense of resistance being evident to both fingers and mallet. Move it about a little to be sure that it is in a free cavity. In some narrow antra, if puncture is made too far forward, the canula can be carried into the cheek. This is more likely to occur where the canine fossa is very much depressed. I have had this happen once and blew some air into the cheek. The experience, while devoid of danger, was an unpleasant one. In this instance puncture was made too far forward, as a subsequent puncture, the canula being inserted a little further back, discovered the presence of pus. An absolutely sterile trocar and canula is to be used,

and if no pus is present, no harm will be done. If a canula without trocar is used, be sure that it is permeable before introduction. As soon as the canula is in position, sterile water is syringed through it, when pus, if present appears in the middle meatus. If none is found, and it is an acute case, a few washings through the canula may effect a cure; hence it is desirable to leave the canula in situ, or what I regard as better, to enlarge the opening with drill or curette so that a curved canula can be easily introduced for a short time at least. The ordinary non-bulbous silver or hard rubber Eustachian catheter answers very well as a canula for daily introduction. This enlargement of the opening is usually not difficult to make, provided the area has been thoroughly anesthetized. By still further enlarging this opening under the inferior turbinate with a nasal cutting forceps of the alligator type, I have been enabled to get and maintain a good-sized opening, through which washing can be done by the patient without difficulty, and have obtained cures in cases where I had supposed a radical operation would be needed.

In all cases in which the pus has lasted for any length of time and is foul, and resists temporary treatment, more radical measures will be needed. Any obstruction to drainage in the interior of the nose should first be removed, preferably under cocaine anesthesia, and some days previously. The patient is then etherized. (If there is any suspicion of the case being dental in origin, the suspected tooth is removed and a good-sized curette passed up into the antrum cavity, through the alveolar process, the instrument being directed backward rather than absolutely vertically. The ordinary dental drill is not usually long enough or large enough. This was formerly the only method of treatment, but has many disadvantages, owing to the constant tendency of the alveolar process to close, and the consequent difficulty of maintaining an opening for a sufficient length of time to be sure that the drainage is complete and long continued enough to bring about a cure in the antrum.) A horizontal incision, one inch long, is made where the mucous membrane folds on to the cheek and at the point between the second bicuspid and first molar. The periosteum is laid bare above and below, and the edges of the wound held back with elevators; a small opening is made with the chisel, and this enlarged with chisel or cutting forceps so as to give an opening sufficiently large to put the finger into, and allow room for thorough inspection. The bleeding will be profuse at first, but is easily stopped by pressure. The mucous membrane is then inspected, and the treatment carried on according to its condition. If simply purulent it is thoroughly cleansed, curetted a little if need be, but not entirely removed unless extensively diseased, and packed with iodoform gauze. Soaking the gauze in adrenalin solution 1-10,000 will lessen the hemorrhage of the operation. In case there is granulation and extensive disease, the whole antrum area is thoroughly curetted of its mucous membrane, the natural opening into the nose either enlarged or else a new one made underneath the inferior turbinate sufficiently large so that it will never completely close, the cavity packed with iodoform gauze, and the flaps allowed to come together into place. No suturing is necessary, as long before the cavity is completely healed the mucous membrane will have united and nature will have formed what is practically new bone on the periosteum.

The after-treatment consists in daily washing with diluted antiseptic solutions, as hot boric acid solution, Seiler's solution and the like. The gauze is kept in until suppuration seems to have ceased and healthy granulation has begun to form. The opening must be maintained some time after apparent cure, as otherwise the condition may recur. The difficulty in operations of this class is not that the opening remains open but that it closes too soon. In all of my cases the bony opening even when made very large has rapidly closed. No deformity or falling in of the cheek follows this operation.

Some authors close up the opening through the canine fossa by stitching the edges of the wound together at the time of operation, and complete the after-treatment entirely through the nose. This obviates the disagreeable taste of iodoform or any other gauze, but to me has had the disadvantage that it did not allow sufficiently long inspection of the cavity. By maintaining the opening through the canine fossa for a few days, one is able to inspect the entire antrum cavity with light and see whether any shreds or bits of tissue which ought to have been removed at the primary operation still remain. If that is the case, they can be removed. Inasmuch as the edges of this wound usually unite without difficulty, and should they fail to do so, a little freshening of the edges will readily unite them, it has seemed to me an advantage to maintain this opening for a certain length of time.

The after-treatment is comparatively simple. Complete cure will usually take place though the length of time may be considerable. I have seen cases of the foulest antrum disease of probable dental origin heal with entire cessation of discharge in from three to four weeks after the opening into the canine fossa and the alveolar process. Cases of purely nasal origin are usually entirely healed in a few weeks, and if the opening into the floor of the nose is maintained for permanent drainage, there is little liability of recurrence.

A complete operation with good drainage, while it may appear more formidable and radical at the time it is done, is much more satisfactory both to operator and patient, since the time of healing is shorter and the disagreeableness of the after-treatment much less.

In cases complicated with frontal sinus disease it will occasionally, though rarely, happen that an opening may have to be kept through the canine fossa for some time. I have had one case in which a small opening was maintained for nearly two years, healing of the empyemata of both cavities finally taking place.

ACUTE INFLAMMATION OF THE FRONTAL SINUS.—These occur in connection with the ordinary acute inflammations of the nasal membrane, such as acute colds in the head, grippe and the exanthemata. They are due to the extension of the inflammation along the mucous membrane, or to obstruction of the natural outlet.

The symptoms are headache, a sense of constriction in the forehead, pain over the sinuses and at the inner angle of the eye and region of the supra-orbital notch, accompanied by secretion. The secretion consists of mucus, mucopus, or it may be purulent, although acute purulent inflammation of the frontal sinus is comparatively rare. The sinus may also be acutely inflamed as a result of disease processes in the neighborhood of the middle turbinate and ethmoidal cells, which processes interfere with the natural drainage from the sinus.

Diagnosis.—This is made from the symptoms in case there is no discharge of any amount other than mucus or mucopus. If pus itself is present, it may be seen on looking into the nose, at the anterior end of the middle turbinate and quite high up. It is not always possible to differentiate inflammation of the frontal sinus from acute purulent inflammation of the antrum or acute purulent ethmoiditis, although the fact that the pus discharge is not influenced by position, is constant in amount, appearing after being wiped away, will lead to the suspicion of its coming from the frontal sinus.

Treatment.—The acute inflammation usually takes care of itself with the subsidence of the cause. Internal remedies which reduce inflammation, sprays, and frequent syringing with warm or hot saline solution, produce the best results. In case the inflammation is purulent, the removal of the anterior end of the middle turbinate and the clearing of the neighborhood of all possible obstructions will very likely bring about a cure by itself, inasmuch as the natural drainage of the cavity is downward.

Many obscure cases of headache labeled frontal neuralgia of one sort and another are due to interference with the normal ventilation of the frontal sinus. Pain may also co-exist with a certain amount of mucopurulent discharge from the sinus, the quantity of which is so small that inspection reveals no pus. Two recent cases illustrate this, both of which improved after removal of the middle turbinate.

The first was that of a physician who suffered intense headache with inability to do his work. He was taking large doses of codeia with only partial relief. Examination showed a swollen middle turbinate, the removal of which caused some relief. Following this removal it was possible a day or so later to pass a canula clear into the frontal sinus, and a considerable quantity of mucopus was washed out, after which recovery was prompt and complete.

The second case was that of a man complaining of intense pain in the region of the right eye, for which he was sure his eyes were at fault, but repeated visits to the oculist had given no relief. Examination showed a swollen middle turbinate which was promptly removed; a frontal sinus canula was then introduced, and some mucopus syringed out, with immediate subsidence of all the symptoms and no further complaint of the eyes or of headache.

CHRONIC INFLAMMATION OF THE FRONTAL SINUS.—This condition is usually due to long-continued inflammatory processes in connection with ethmoiditis, polyp formation, inflammation of the antrum, or to any cause that has interfered with the natural drainage of the frontal sinus and been productive of more or less inflammation in consequence.

Symptoms.—These are a chronic discharge of more or less foul usually thick pus, accompanied by more or less pain, headache and general discomfort in the region of the sinus. Pain on external pressure may or may not be present. It is usually best elicited when pressure is made at the inner angle of the roof of the orbit, *i.e.*, on the floor of the sinus. There may be obstruction to nasal breathing owing to polyp formation or to the frequently accompanying ethmoiditis.

Diagnosis.—The diagnosis is made by inspection of the site of the nasal discharge in connection with the general symptoms. The diagnosis may be difficult, especially when polyp formation or swelling of all the adjacent mucous membrane is an accompanying feature, as it frequently is. In this case the polypi must be removed and the source of the pus explored until we are certain of its point of origin. With the probe curved in accordance with the natural course of the canal it is sometimes possible to pass it directly into the frontal sinus. While this procedure will in many cases fail, it should always be tried. Thorough cocainization and the use of suprarenal solution will help to shrink the tissues and materially aid the procedure. The diagnosis will be helped by the removal of the anterior portion of the middle turbinate. In all cases where there is even suspected trouble with the frontal sinus or where there seems a crowding together of the middle turbinal against the septum, it had better be removed. I have several times removed it for pressure symptoms either in connection with the eye or for difficult breathing, and have never regretted so doing. It at times enlarges so that it interferes materially with respiration, and whenever acute colds or congestion takes place, occupies so much room as to produce pain. The best method of removal is the following: Cocainize thoroughly, and then

blanch the tissue with 1-1,000 adrenalin. With small-sized alligator forceps make a cut at the highest part of the middle turbinate as deeply as possible. Make a counter cut on the lower border as far back as it is desired to remove the bone. Place the wire of a stout snare in the spaces made by these two cuts, and slowly tighten. The anterior half of the middle turbinate will then come away as one piece. Any portions remaining are easily removed with cutting forceps. On account of the liability of hemorrhage it is safer to pack lightly for twenty-four hours with gauze or cotton saturated in peroxide of hydrogen and oil, equal parts. The addition of the oil renders the removal of the pledget easier and is itself of some hemostatic value. The passage of a probe up into the sinus may be impossible before this is done, and quite possible afterward, owing to the additional room provided.

After the passage of the probe, an attempt should be made to introduce a canula, bent according to the shape of the probe, up into the sinus. Water can then be syringed directly into the sinus or air blown in, and the appearance of pus at the nasal end of the canal, or the presence of a foul odor, will render the diagnosis certain. The sensations of the patient will be of material aid in determining whether the canula or probe is really in the sinus; since it is very easy to pass the instrument into some of the anterior ethmoidal cells and imagine it to be in the sinus. I have found the sensations of the patient, as to whether the syringed fluid or air were really in the sinus, quite reliable in the main, though of course sometimes misleading.

Treatment.—Given a diagnosis, what is to be done? This will depend on various circumstances, such as the age of the patient, the long standing of the disease, and the desire of the patient for a radical cure. There are two methods of operation—the internal or nasal, and the external.

The Internal Operation.—This consists in the endeavor to cure the disease through the nose by the establishment of direct gravity drainage as complete as possible, in the way indicated under diagnosis. Remove the middle turbinate and all obstacles to drainage that can be removed, and then carry a canula up into the sinus as far as possible and syringe daily with a cleansing solution. I have found 1-8,000 or 1-10,000 corrosive sublimate, 50 per cent. enzymol or alkalol to be most efficient. The corrosive should be followed by an alkaline douche through the nasal cavities and pharynx, to offset its irritant effect upon the tissues. Sometimes a cure seems to be effected in this way, or else the discharge diminishes very materially, and the disease ceasing to be a source of discomfort to the patient, he passes out of observation, satisfied with a condition in which the odor has ceased and the headache and pain are no longer troublesome. In many persons one has to be content with this method of treatment, which always results in improvement, though not always in an absolute cure.

The External Operation.—When an absolute cure is desired, or when there are symptoms of pressure, continued headache, pus absorption with increase of temperature and symptoms indicating inefficient drainage, external operation should be considered and advised. Although, if the bone destruction is considerable and the ethmoid cells are extensively diseased, as they may be, an absolute cure may fail or be attained only after a long time, nevertheless, in the majority of cases the cure will be complete, there is no appreciable external deformity, the operation is practically devoid of risk, and the period of after-treatment is not extremely long.

Method.—There are a number of external operations, but I shall describe only one, since that one is generally feasible (though not as radical as the recently described operation of Killian) and has, to my mind, more to recommend it than any other.

The diagnosis being sure, the eyebrow of the affected eye is shaved and the skin rendered aseptic. As the bleeding is considerable from this operation, it is a good plan to place a tampon in the nasopharynx at the time of the operation, so that all the blood will pass out through the front of the nose. A curved incision is then made from just inside the supra-orbital notch along the lower third of the eyebrow region and as far as or a little below the root of the nose. The periosteum is laid bare and the edges of the wound held back by retractors. With a small chisel an opening is now made at about the middle of the incision in the direction of the sinus, and continued until the sinus is reached. The operator will occasionally be surprised at the depth he will have to chisel before reaching the sinus, as the wall is comparatively thick at this point. As soon as an opening is found, it should be explored with the probe so as to be sure which sinus has been opened since the division line is not always in the middle. If the bone be opened immediately above the root of the nose in the angle between the inner third of the supra-orbital margin and the mesial plane of the forehead, a sinus, if present, will always be opened up. The presence or absence of pus and granulation tissue and the character of the mucous lining are next determined. This being accomplished, the opening is enlarged sufficiently to render all parts accessible to the probe or curette, and the sinus curetted or not in accordance with its condition. If extensively degenerated it should be vigorously curetted and all its ramifications followed up; otherwise considerable diseased tissue will be left behind. Hunt especially for pockets. As soon as this is done, the natural opening into the nose through the frontonasal canal should be explored with the probe and then enlarged with the curette, so as to make the largest opening possible without injury to any other struc-

tures. If the opening with the curette is made outwards and backwards there is little danger of doing any damage, and at the same time the adjacent anterior ethmoidial cells, which are almost always affected, can be reached and opened. As this opening is essential to drainage, and gravity drainage favors rapid healing, it should be made as large as possible, and all cells broken down. The little finger in the nose will be a guide to the direction of both probe and curette. To maintain the opening down into the nose, a good sized rubber drainage tube is next inserted, one end appearing at the nasal entrance and the other at the sinus end of the external wound. This should be maintained for a week or ten days so as to keep the opening into the nose a sufficient length of time during the process of healing. The question of the closing of the external wound must next be decided. If one could be sure that all the diseased tissue had been removed and the process had not existed too long, and there was little or no bone destruction, the external wound might be closed. There is, however, some danger of recurrence from re-infection from the nose, and as a result of several years' experience, I now favor the maintainance of the external opening and the complete obliteration of the sinus cavities, as in some of my former cases in which I allowed the wound to close after a period of even one or two weeks, I was obliged to re-open. In one instance there was no recurrence for three years, when, during an attack of grippe, the sinus became re-infected. A large opening was then made with thorough removal of all softened bone, and the case treated by the method of obliteration. This requires a much longer time in the after-treatment, from two to four or five months being necessary according to the rapidity of healing and the size of the sinus. It is packed every other day with gauze tampons, especial care being taken to maintain the external opening. When healing has finally taken place, both sinuses are firmly filled and the external deformity is practically nil. Should there be extensive ethmoiditis, the length of time for healing will be materially lengthened. Here it is better at the time of operation to destroy every cell which can possibly be reached. Although apparent healing is obtained in much shorter time by closure of the wound and the reliance on nasal drainage, and although I have had several apparently satisfactory cures by this method, yet the number of recurrences has been considerable, so that I most empathically recommend the endeavor to obliterate the sinus cavity.

Where the sinus is very, very large, it has been recommended to do the operation above the supra-orbital ridge. Take away the entire front wall of the sinus to allow the soft parts to sink in, doing immediate closure except at one angle of the wound, and filling any deformity which may remain by the injection of paraffin. Here the amount of deformity is much less than would be expected, as the subcutaneous tissue seems to expand to a certain degree so that the sinking in is comparatively small.

A much more radical operation, that of Killian, has recently been recommended in which the entire removal of the floor of the sinus and all its anterior wall, with the exception of a slight bridge corresponding to the supra-orbital ridge, with immediate closure of the wound, is recommended. This operation is very extensive, gives rise to considerable deformity, and has, as yet, not received any great favor in this country, although as now perfected by its author, it is said to be free from the danger of recurrences, and to have less deformity than would be expected.

Sphenoid sinus disease was formerly thought to be comparatively rare as a primary condition, but recent investigations have shown that the sphenoid is invaded by purulent processes more frequently than was formerly supposed. In many subjects it can be probed and examined with comparative readiness. In others, the removal of a portion of the middle turbinate is necessary. When pus is present, the anterior wall will have to be removed in order to maintain drainage, as the natural opening is at the most superior part of the sphenoid cavity.

The *anterior ethmoidal cells* as such may be primarily involved and the condition of purulent ethmoiditis be present. This will usually be accompanied by formation of polypi, bare bone, and other evidences of disease of the walls of the individual cells. Remove with a snare and curette all the polyps which are present, break down as many of the individual cells as possible under good illumination, and clear them out. Repeated operations of this type will probably in time so far clear up the case as to render the patient's condition practically normal, although it must be conceded that many times there still remains more or less purulent discharge. As, however, the condition of these cases is invariably helped, the patient's condition is so much better than his former one that the occasional discharge of a little pus from the nose ceases to be an annoyance to him.

So much then for a rapid résumé of the individual affections. In many instances one has to do not with the simple empyema of one cavity but an empyema of one or more cavities, due to the fact that they easily infect one another. The frontal sinus not infrequently infects the antrum and, indeed, in those cases in which the sinus seems to be the only cavity diseased, it has seemed to me, as a result of experience, that it is always safer to open and provide for the time being a drain from the antrum, inasmuch as during the healing of the frontal sinus inflammation, sufficient pus may drain into the antrum from the infundibulum or hiatus to infect that, and a secondary antrum inflammation be produced at the same time that the cure of the frontal sinus inflammation is taking place.

Briefly to sum up, the patient presents himself to us with pus coming from one or both sides of the nose. What is the plan of procedure?

1. Clear the nose of all visible sources of obstruction, especially polypi, which easily grow or are maintained wherever and whenever surfaces are bathed with pus.

2. Examine the teeth to see whether there is anything in the way of probable dental origin of sinus trouble.

3. With the nose carefully cleaned, endeavor to ascertain, if possible, by inspection whether the pus seems to come from the antrum or from the frontal sinus or from various points in the ethmoid cells.

4. If the apparatus for the same is at hand, try transillumination, not only for the antrum but also for the frontal sinus as well.

5. Make an exploratory puncture of the antrum in the manner I have already described.

6. If the antrum is free, explore the frontal sinus for the pus, try to wash out with the canula, or to pass a probe, if possible. If not, next remove the middle turbinate. If the antrum contains pus, endeavor to cure it by washing out for a reasonable length of time. Failing in that, do a radical operation. Remember that the better the drainage, the faster the cure, and do not content yourself with a small pin-hole opening made by a small dental drill through a root cavity.

7. If the pus appears to come from the frontal, wash it out with a canula if possible, pursuing this treament a reasonable length of time, and being guided as to the question of a future operation somewhat by the feelings of the patient; somewhat by the annoyance of the discharge; somewhat by the chronicity of the case, remembering that the frontal sinus is a simple, large, irregular cavity, that it may communicate with one or more of the anterior ethmoidal cells and that the operation, while not of itself especially serious, may mean a long and more or less prolonged course of after-treatment. Do not fail to do it or have someone else do it in case it seems indicated.

8. Where there are several empyemata it is better to clear out the nose as thoroughly as possible and then, under ether, do the operation on all the cavities at once.

Careful study of the individual case over a sufficient length of time will usually bring one finally to success and the results are worth all the time and effort spent upon them. So far as the general practitioner is concerned, it seems to me that when it comes to the operations, they had best be done by someone skilled in that line, although it is essential that the general practitioner to whom the patient in all probability originally comes, should know sufficient about the case intelligently to advise his patient and should at least have a good mental picture of the pathological processes going on.

When more attention is paid by the average practitioner to the real pathological conditions present in the nose, and they are not all dismissed under the heading of catarrh or neuralgia, progress will have been made.

Note.—In the preparation of the foregoing the author has drawn somewhat from the chapters covering the same subject in his book, "Nose and Throat Work for the General Practitioner."

MEDICAL PROGRESS.

MEDICINE.

Excretion of Purin Bases in Feces.—According to A. SCHITTENHELM (*Deutsch. Arch. f. klin. Med.*, Vol. 81, Nos. 5 and 6), the normal feces of man always contain purin bodies, but the amount is small and very variable. There seems to be a direct relation to the amount of dry residue: If this is large, the amount of purin bodies is also relatively high. They are also present in the feces after an absolute carbohydrate diet, since the intestinal contents will here contain more bacteria and a more active desquamation of epithelial cells will take place from the intestinal walls. Food rich in nuclein, such as thymus, will also increase the amount of purin, but the bases normally present in muscle seem to be well absorbed. There is generally a decided increase with diarrhea, a diminution in constipation, since absorption is increased, and since the prolonged action of bacteria will convert amniopurin into oxypurin, which passes more readily through the intestinal walls. A diminution is also common with pancreatic disease and in alcoholic stools. Uric acid is generally found in meconium, but never in the feces of extra-uterine life. The purin bases in the feces are chiefly present in a free state, but a small percentage is combined with nuclein and another portion with pentose and hexose. Purin bases occur regularly in pancreatic secretion, but never in bile unless the biliary passages are inflamed. Adenin and guanin are abundant in the walls of the intestines, together with smaller amounts of xanthin and hypoxanthin. Probably a large percentage of the purin bases in the feces is derived from this source.

Absorption of Potassium Iodide from the Stomach.—More than twenty years ago a new method was introduced, to determine the degree of absorption which goes on from the stomach in health and disease. The patient received a capsule containing potassium iodide, and the saliva and urine were then tested at stated intervals for this salt. The value of this method has been frequently doubted, so that the experiments of K. H. BAAS (*Deutsch. Arch. f. klin. Med.*, Vol. 81, Nos. 5 and 6) are of the greatest practical importance. This author discovered that a moderate dose of morphine caused a spasm of the pylorus, so that nothing can leave the stomach by way of the pylorus while the effect lasts. The urine of dogs and rabbits which received a dose of morphine before the iodide was administered, gave a very late iodine reaction, while without morphine the test was positive in a few minutes. In man, a closure of the pylorus also takes place after morphine, and there can be no doubt that iodide of potassium is not at all absorbed from the stomach, and hence unfit for testing the motility.

Notes on Diabetes.—From the careful analysis of of a severe case of diabetes, A. R. MANDEL and G. LUSK (*Deutsch. Arch. f. klin. Med.*, Vol. 81, Nos. 5

and 6), conclude that the relation of dextrose to nitrogen in urine is of great prognostic value. In absolute diabetes, such as results from the injection of phlorhizin into animals, the preparation is generally 3.65 to 1; it follows, if the same figures are obtained in human beings, after a simple fat-meat diet, that the intolerance for sugar is complete and the prognosis very bad. With less excretion of sugar in proportion to the nitrogen, a certain amount of improvement is always possible. The presence of acetone, diacetic and oxybutyric acids in the urine need not always be alarming, for patients have been known to excrete 5 to 6 grams of acetone and 30 to 40 grams of oxybutyric acid, and still improve considerably. There is no reason to believe that the ingested fat participates in the formation of sugar, even if figures higher than 3.65:1 are obtained; it is more likely that the excess of sugar is derived from proteid taken the day before, since the nitrogen of proteids is always excreted more rapidly. Yeast had no influence whatever on the amount of sugar. When the patient was fed on oatmeal and levulose, 85 per cent. of the starch of the former and 80 per cent. of the latter appeared in the urine as sugar. Recently Clowes has constructed a formula for determining the percentage of sugar in urine, if the specific gravity and freezing-point are known, but the authors have found errors up to 1.5 per cent., which make this method incorrect. It is a strange fact that in dogs with extirpated pancreas, the D:N ration never exceeds 2.8:1; this is best explained by assuming that after phlorhizin, the kidneys are able to decompose a compound of proteid and dextrose which is normally burnt up in animals which show the proportion 2.8:1.

Ascaris in Biliary Passages.—It is well-known that the *Ascaris* possesses the property of forcing its way through narrow openings to a high degree, and it is believed by many that the worm can get into the biliary passages and give rise to symptoms of gallstone colic and sepsis. That this is indeed possible is demonstrated by a patient of EBSTEIN (*Deutsch. Arch. f. klin. Med.*, Vol. 81, Nos. 5 and 6). This patient suffered from all the symptoms of obstructive jaundice and biliary infection until she passed several worms, one of which clearly showed a deep constriction near its head, proving that it had lodged in a narrow canal. The patient recovered completely and had no recurrence for eight years.

Relation of Articular Rheumatism to Angina.—The type of angina, which most frequently precedes an attack of acute articular rheumatism is the chronic desquamative type of tonsillitis, according to D. GÜRICH (*Münch. med. Woch.*, November 22, 1904). That there must be an intimate relation between the two conditions is proven by the following: Several patients suffering from recurrent rheumatism were treated with the salicyates, with excellent, but only temporary relief. It then occurred to the author to curette out the tonsillar recesses and ever since the operation, the patients, have remained free from rheumatism. The symptoms of the tonsillar affection are neuralgia, fetor from the mouth apparently without cause, and often globus hystericus. It is often difficult to see the crypts with their stagnating contents, since they are lodged in the fossa behind the tonsil proper.

Etiology of Facial Paralysis.—Undoubtedly exposure to cold is the most common cause of facial paralysis. D. STENGER (*Deutsch. Arch. f. klin. Med.*, Vol. 81, Nos. 5 and 6) does not, however, believe that the nerve is easily affected by cold at its most exposed portion, the stylomastoid foramen, but thinks it is particularly vulnerable in its course within the tympanic cavity where it often lacks its bony covering. The sudden change of temperature is followed by an exudation into the nerve-sheath which results in paralysis owing to the pressure it exerts upon the nerve. If a rhinoscopic examination be made in cases suffering from facial paralysis, the side and the Eustachian tubes should be open, so that a cold draught of air can easily reach the tympanic cavity and hence the facial nerve.

Congenital Icterus with Splenic Tumor.—A most peculiar pathological condition came under the observation of H. V. KRANNHALS (*Deutsch. Arch. f. klin. Med.*, Vol. 81, Nos. 5 and 6). A patient presented himself for jaundice and its concomitant symptoms, which had troubled him since early childhood. Otherwise he felt perfectly well, and physical examination was negative, except for a fairly large, firm spleen. Further questioning elicited the remarkable fact that several sisters and brothers, his mother, grandmother and aunt, and some other more distant relatives were just as yellow and also complained of an abdominal tumor. The urine of the patient contained no pathological elements except bile; his feces were never acholic and his blood showed a moderate anemia with polychromatophilia. The pathology of the condition is not known since autopsy records are not at hand, but it is likely that the enlargement of the spleen is the primary condition, and that the bile in the serum results from the action of some toxin on the liver.

The Copper Treatment of Water.—This new method of antisepsis has been investigated by HENRY KRAEMER (*American Journal of Pharmacy*, December, 1904). For testing copper sulphate two aqueous solutions of strengths 1 in 100,000 and 1 in 1,000,000 were employed, of the total number of organisms exposed there was a reduction of 99 per cent. with the stronger solution and of 90 per cent. with the weaker. For testing colloidal copper, strips of copper foil were used, and 85 to 97 per cent. of all organisms were destroyed. Special tests were made of the colon and typhoid bacilli, using pure cultures developed in bouillon from eighteen to twenty-four hours. Two 3-millimeter loops of each were added to 200 c.c. of each of the following: (1) Ordinary tap water; (2) tap water which was filtered; (3) filtered tap water, which, after treatment with potassium permanganate, was distilled three times in apparatus constructed entirely of glass. All the solutions had been sterilized at 110° C., for thirty minutes. After adding the cultures a portion of each solution was separated for control, and copper foil added to the rest. They were kept at 35° to 37° C., and plates were made at the time of the culture, and after four, eight, twenty-four and forty-eight hours. The plates were kept at constant temperature for two days in the case of *Bacillus coli*, and for five days in the case of *Bacillus typhosus*. There were no organisms of either kind on any of the plates taken after exposure to the copper, even after only four hours, though the plates taken at the time of adding the culture showed from 4,410 to 11,246 of *Bacillus coli*, and 1,400 to 3,986 of *Bacillus typhosus*. Plates from the controls showed from one to two million *Bacillus coli* at the end of forty-eight hours; in the *Bacillus typhosus* controls there were practically the same number of organisms whenever the cultures were made during the forty-eight hours. It may be concluded, then, that the colon and typhoid bacillus are completely destroyed by placing

clean copper foil in the water containing them. By adding copper foil about 3½ inches square per quart and allowing to stand over night, any householder can purify water.

Scarlatiniform Rashes.—The primary rash of scarlet fever, as observed by A. D. HEATH (*Birmingh. Med. Rev.*, October, 1904), is bright brick-red, appears first on chest, neck and upper arms, spreads downward, and is fully developed in about two days. It has generally completely disappeared in a week. The rest of the condition is made up of closely-set minute red papules surrounded by erythema. The face is flushed, the region around the mouth quite pale, and the typical punctiform eruption skips the face except sometimes the forehead and temples. Over the flushed surface of the face a fine powdery desquamation, like the bloom of a peach, soon develops. Desquamation, usually well marked at the end of a week, begins on the face, neck and chest, and lasts a long time.

The eruption of German measles appears first on the face as scattered pinkish-red spots, darker at the center than at the periphery. It spreads rapidly and may reach the feet in twenty-four hours. On the trunk and limbs the spots may coalesce and may resemble the rash of scarlet fever. There may be no desquamation, or it may be furfuraceous, and usually lasts only two or three days. In measles the rash appears, first, on the temples, at the hair margin of the forehead, behind the ears, and at the upper part of the neck. The spots are distinctly papular, may become purplish, may be crescentic in shape, and may occur in groups. The eruption spreads downward and reaches its maximum on the third day. The face is flushed and spotted, and the region about the mouth may be thickly covered with papules. There is a condition, generally met with in summer, in which a roseola appears suddenly on neck, limbs and trunk without prodromal symptoms or glandular enlargement. Among those erythematous rashes which are classed as skin diseases, are those from friction, heat, cold, certain rays of light, and from various irritants such as turpentine and mustard. Children are very subject to transitory patchy erythema, especially from teething or worms. Enemata may be followed by brilliant scarlatiniform eruptions, more commonly if of soap and water; there may be a great sense of heat in the skin, though the thermometer shows no rise in temperature. Scarlatiniform rashes may also be met with after such drugs as copaiba, antipyrin, belladonna, chloral hydrate or quinine, and in diphtheria, influenza and typhoid fever. The writer has seen extensive rashes following the administration of diphtheria antitoxin, and in uremia, septic conditions, acute rheumatism and tonsillitis. The latter, if on the chest, is particularly difficult to distinguish from scarlet fever. A rarer form of eruption is erythema scarlatiniforme, in which a bright scarlatiniform eruption spreads rapidly over the body, often becoming universal in twenty-four hours. Desquamation begins early, is very free, and may include hair and nails. Frequent relapse is common.

The Protozoan of Scarlet Fever.—An important communication on this subject is published by C. W. DUVAL (*Univ. Penn. Med. Bull.*, November, 1904) on his researches on the "bodies" first described by Mallory in 1903 as being found in the skin of autopsied scarlet fever cases. Their presence in the fresh serum was demonstrated, the inquiry being undertaken on the belief that if these "bodies" lying free in the intercellular lymph spaces represented stages in the life cycle of a protozoan, they could be drawn into the contents of an artificially produced vesicle. In all, 18 cases were studied and the protozoan-like bodies were found in five among those last examined and during the stage of the disease when the eruption was at its height. They were not found in the vesical contents of normal individuals. Furthermore, a careful search of the contents of artificial vesicles produced on chemical injured skin failed to show them. Again, the bodies were not found in the serum from artificial vesicles produced on the skin of other acute exanthemata. In the production of the vesicle aqua ammonia fortior was employed after trials with a number of other agents. The serum in these vesicles is free from leucocytes and red cells.

Laparotomy in Typhoid.—Four cases, with a successful result in all, are reported by FITCH, of the Massachusetts General Hospital (*Boston Med. and Surg. Jour.*, December 8, 1904). Two of these were for perforation. In one of them, the leucocytes showed a fall, contrary to the rule, from 11,000 to 4,200. One was for appendicitis, and one for ruptured pus tube. These were the only typhoids during the year which came to operation, so that the statistics are remarkably good, and very encouraging. In the case of perforation reported in detail, operation was done within four hours, yet the belly contained free intestinal contents.

Treatment of Pneumonia in Adults.—M. MANGES (*Med. Rec.*, December 10, 1904) says that the tendency is to forget that this is a general disease in which there may be great disparity between the local signs and the patient's general condition, severe cases sometimes giving evidence of but slight lung involvement and *vice versa*. So far, the attempts to devise a specific treatment have not been successful, and but little is to be expected in this direction, for the pneumococcus is not always a constant quantity, and various other organisms, including the influenza bacillus, which, of late, has markedly influenced the disease, may be present in mixed infections. The author's detailed discussion of the treatment is subdivided under the following heads: (1) To maintain life. The careful management of the stomach by a suitable diet to prevent distention and the consequent cardiac embarrassment is of the highest importance. It is wiser to give too little food than too much and to avoid all carbonated beverages. (2) To support the heart. The best drugs for this purpose are strychnine, caffeine, alcohol, camphor, and ergot. If prompt results are not obtained all the drugs should be given hypodermatically and in sufficient amount to exert their physiological action. Views as to the value of large doses of digitalis are still divided. Adrenalin, the precordial ice-bag, cupping and venesection are also useful measures. (3) To control hyperpyrexia. Large flat ice-bags on the chest will be found useful, but care is necessary to avoid producing intercostal neuritis. Cold sponging and packs are of value, but must be used with caution, and cold baths are contraindicated. The rational use of coal tar antipyretics in small doses may contribute much to the patient's comfort. (4) To relieve suffering. The cough and pain are combated by the use of small doses of morphine hypodermatically, or of heroin hydrochlorate. The Paquelin cautery is of great value for the pleuritic stitches. Oxygen is probably of less value than is generally supposed. Every effort should be made to secure as much sleep for the patient as possible. (5) To control complications. Pleurisy with effusion, empyema, pericarditis, endocarditis, etc., require the treatment ordinarily pursued.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

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AN APPEAL FOR AID IN THE FIGHT AGAINST TUBERCULOSIS.

THE appeal recently issued by the National Association for the Study and Prevention of Tuberculosis is a document pregnant with meaning for the future of the country. For years we have watched for the organization of a great national movement, backed by sanitary reformers possessing brains, experience and determination, and commanding the respect of the members of the medical profession who know better than all others the terrible evils resulting from the spread of pulmonary tuberculosis. Here and there local societies have undertaken to grapple with the problem; now and again a municipal or a State health board, wise in its generation, has sent an advance guard against the enemy; but an authoritative national body, ready and able to give sanction to, and by promoting general cooperation, to guarantee the permanent success of local effort was lacking. At last such a body has been formed. The National Association for the Study and Prevention of Tuberculosis, presided over by Trudeau, seconded by Osler, Biggs, Sternberg, Welch, Wyman, Vaughan, Knopf, Flick, and a score more of men of exceptional training and influence, has entered upon a campaign of education and prophylaxis which must not end until the nation is rescued.

The history of tuberculosis does not need to be retold here. That ignorant consumptives are abroad in the land, sowing everywhere without thought or care, the seed of fatal infection, is a truth which is brought home to each one of us by tragical evidence every day. Nor is it necessary here to dwell upon methods for the treatment of tuberculosis, nor to discuss the relative importance of the various agencies by means of which the spread of tuberculosis can be prevented. In the text of the Association, the eradication of tuberculosis is said to be "an issue involving education, sacrifice, patience, improved sanitation and the responsibility of the individual to the cause of public health." The National Association, it is true, is "organized and equipped for a campaign of study and education"; but the ultimate and lasting success of the movement hinges upon the cooperation of cities, States and the nation—not necessarily through existing governmental agencies, but rather through the enlightened leadership of the National Association for the Study and Prevention of Tuberculosis itself. The saving of human life on a gigantic scale is the aim; the National Association is the guide; the local society is the weapon which will prove most effective in the great fight.

We are informed that the National Association will endeavor to effect "the personal and financial cooperation of those laboring to bring about a new conception of the dangers of ignorance," and that "local societies are to be started with the same aims." It is in this connection that we wish to say a word to the Association and to the medical profession. It should be the avowed purpose of the Association to bring about the organization of a society for every locality or district. The consumptive is migratory, and effective education and control will never exist until the country is organized systematically, county by county and State by State, so that there shall not exist within the United States a place where ignorance and the sanitary vices which have their root in ignorance can find a foothold.

To the medical profession we have this to say: The National Association is now properly started under trustworthy auspices. In the formation of local societies the medical profession is bound to occupy the leadership; and it behooves medical men who are sincere, and in the truest sense

patriotic, to protect struggling local associations, on the one hand against indifference, which is almost criminal, and on the other, against the unreal enthusiasm and the hurtful influence of self-advertisement. Local organizations will be transient or permanent, useless or efficient, according to the characters and purpose of their promoters. Not all physicians can hope to be recognized as leaders, either in the national or local bodies, but all can be sincere well-wishers to the movement, tireless workers in the cause of humanity. It rests with the medical profession to teach their fellows what sacrifice and patience are worth in a movement which is destined to find its place in history among the greatest efforts for the preservation of the race.

THE ROLE OF THE OXIDASES IN THE ANIMAL ECONOMY.

"LIFE is a series of oxidations," has become an important formula of modern physiology. The manifestation of heat and visible motion, in which respects alone life reveals itself to physicist and chemist, has been amply explained in the basis of an oxidation of the complex organic compounds out of which the tissues are built.

Not content, however, with this conclusion, physiologists have probed more deeply into the mechanism of vital oxidations, and discovered that these processes are brought about by certain unorganized ferments present in the tissues, and called oxidases. The discovery of these substances has opened up a glittering world of possibilities to the investigator.

The oxidases are catalytic agents possessing the property of uniting with molecular oxygen and delivering it in its atomic or active form to the tissues. These enzymes are present in all parts of the body and have been discovered even in the milk and urine. They have not been isolated in their pure state, but their presence has been definitely demonstrated by a variety of well-known tests.

The practical importance of investigation on the nature of the oxidases and their mode of operation can not be overestimated. It was not entirely poetic imagination that inspired Jacques Loeb to predict that through the oxidases one may in time be able to control life as the artist governs the keys of the piano. Not merely the normal course of life, but also that vast gamut of diseases characterized by metabolic derangements, might be controlled if we only knew how to favor or retard the action of the oxidases.

Recent researches in this domain, valuable in themselves, are still more valuable as an earnest of the rich harvest which the future holds. L. Liebermann has pointed out a close analogy between colloidal platinum and the oxidases. The former, which has for a long time been known to act as a catalytic agent in the decomposition of peroxide of hydrogen, owes this power to the active oxygen which it contains. The colloidal solutions of platinum possess the capacity of activating molecular oxygen. In this process loose compounds of platinum and oxygen are formed. The catalytic power of colloidal platinum is increased by the passage through it of some inert gas, such as hydrogen or nitrogen, which action is attributed to the mechanical agitation produced by the streaming gas which by breaking up large particles of the platinum, renders this capable of uniting with a large amount of oxygen. The surface attraction of the large extent of surface represented in the very fine particles present in solution, is capable of tearing asunder the constituents of the inactive oxygen molecule.

It is highly probable that the oxidases act in a similar manner. If this is really the case, then physical phenomena would play a large part in either retarding or accelerating the action of the oxidases. May not the supposed beneficial effects which follow vibratile stimulation of the organism be possibly connected with some mechanical influence on the oxidases? May not the normal rhythmic beat of the heart and muscular exercise favor the metabolic processes of the body by acting in a mechanical way upon the oxidases?

In this connection the recent experiments of A. Lowy and F. Müller are of interest. In studying the influence of sea-climate and sea-bathing upon metabolism, these investigators found that the latter is increased by west winds and an increased force of the waves, which act as physical stimuli.

The experiments of L. Liebermann on colloidal platinum also open up a vast field of possibility in the domain of pathology. This observer states that the mechanism of the oxidative reaction helps to explain certain phenomena connected with the destruction of foreign and toxic bodies in the organism. Certain pathogenic bacteria are rendered innocuous by uniting with protective bodies normally present in the organism, the complements of Ehrlich. But these act so slowly that they cannot fortify the organism against an intoxication. On this account another body is

necessary, the amboceptor (immune body), which will unfold the activity of the complement. The analogy to the phenomena of the oxidative reaction is as follows: The pathogenic agent corresponds to the tissue, the complement to the active oxygen, and the amboceptor to the oxidase. The amboceptor is thus nothing more than a catalyzer.

That catalytic agents akin to the oxidases play an eminent rôle in subduing septic processes in the organism is indicated by the recent researches of M. J. Hekman and H. J. Hamburger. These observers sought an experimental demonstration of the clinical experience that colloidal silver has a favorable effect in various forms of bacteria invasion. They found that while solutions of collargolum of a low concentration increase the hemolytic power of staphylotoxin, solutions of a higher concentration entirely inhibit hemolysis. The authors attribute the inhibitory action of colloidal silver to some catalytic effect. In view of Liebermann's experiments on colloidal platinum, this conclusion is probably correct.

SOME MEDICAL JESTING.

THE *Münchener medizinische Wochenschrift* issued its usual joke number about a month ago, this time in honor of the celebration of the seventieth anniversary of the Foundation of the Physicians' Union of Munich. Though it has some excellent medical jesting, we are inclined to think that it is not up to its usual standard, and many of the jokes seem heavy and far-fetched.

Several of the articles, however, are excellent, probably the best is that on the physician's wife. A number of very practical bits of advice are given to that wondrous creature from whom so much is expected and to whom, it is said, so much of blessing comes, as the helpmate of the doctor. She is reminded that if she should be in want of certain things in the household, there are a number of instruments to be found in the doctor's office that can well supply many ordinary needs. Amputation saws may be used very effectively for making kindling wood and will even be found of excellent service in sawing joints in the kicthen, if no other means be readily available. She is reminded too that for toilet purposes, if the ordinary hand-mirror be mislaid. the forehead-mirror of the physician, or, better still, for the minute facial toilette the laryngeal mirror of the specialist can be brought into requisition. In case the ordinary chafing dish should fail to work, it can always be remembered that the doctor has an alcohol lamp, and that along side it will usually be found the funnel with filter paper meant originally for a quite different use, but that may well be employed for many household purposes. This last is an especially German touch.

She is told that of course there are many interesting books in the doctor's library and that it is only the proper thing that a doctor's wife should know as much as possible about medicine, and especially about the seamy side of it, and it is suggested that she might well occupy the time during which he is absent on night calls by sitting up for him and making herself familiar with the contents of particular shelves of his library. It is not added that this may give rise to a number of ideas and resultants that are no joke, but then every one must learn by her own experience, though it has been said that wise people sometimes learn by other peoples' experience.

There is an excellent take-off on an especially rare fracture of the wrist which has not yet occured, as illustrated by the Roentgen radiogram which fails utterly, alas! (as they sometimes do) to illustrate. The leading article consists of the romance of a white blood corpuscle, an eosinophile, the red coloration it effects being or seeming to be something of the the same sort of evidence of the feminity of these cells that the presence of a large head of henna-colored red hair would be among human beings. The poor white cell has the usual fate of those in love and finds many obstacles in the path of union with her beloved pyramidal cell whom at first she detested very much. Unfortunately the cataclysm in her affairs is brought about by the occurence of a urethral blenorrhagia in the human being of which she is one of the cell colony and carried away by positive chemotaxis as by another Johnstown flood, she finds death and destruction with many of her sisters as the result of submersion beneath waves of a silver solution in the urethra.

ECHOES AND NEWS.

NEW YORK.

Honors for Dr. Carl Beck.—The Society of Medical Jurisprudence recently elected Dr. Beck its President for 1905. He has also been elected Corresponding Member of the Medical Society of Munich, an honor never before conferred upon an American.

The Eastern Medical Society.—At the annual election of the Eastern Medical Society, held December 9, the following officers were chosen for 1905: Ephraim K. Browd, M.D., President; A. Hymanson, M.D., First Vice-President; Charles Goodman, M.D., Second Vice-President; A. Rovinsky, M.D., Treasurer; M. M.

Stark, M.D., Recording Secretary, and Emil Altmark, M.D., Corresponding Secretary.

Seney Hospital Secures Gift.—The Board of Managers of the Methodist Episcopal Hospital, Seventh Avenue and Seventh Street, Brooklyn, has announced that it has succeeded in raising the fund of $300,000 necessary to secure to the hospital the gift of $125,000 from Mr. and Mrs. William Halls, Jr. The managers will now try to raise a second fund of $200,000. The institution is better known as the Seney Hospital, it having been founded by George I. Seney in 1881.

Dr. Dunning Retires.—Dr. Emily Dunning, who has served for two years as an ambulance surgeon attached to Gouverneur Hospital, received a set of engrossed resolutions from the police and hospital officials with whom she has worked. Miss Dunning has been the only woman ambulance surgeon in the city, having been appointed to the Gouverneur Hospital staff on January 1, 1903. She retired on December 17, and will be married shortly to Dr. Benjamin Stockwell Barringer, former House Physician in a New York hospital.

Vaccination of School Children.—"The Present Status of the Law Relating to the Vaccination of School Children" was the subject of the paper read on December 15, before the conference of sanitary officers of the State, by Deputy Attorney-General Sanford T. Church. After quoting from a decision of Judge Vann in a case involving compulsory vaccination, Mr. Church said: "We may therefore unqualifiedly assert that the statute requiring all children to become vaccinated as a precedent to their attendance upon the public schools of this State is valid and constitutional, and a proper exercise of the police power."

Memorial to Dr. William R. Pryor.—The Medical Board of St. Vincent's Hospital, at the regular quarterly meeting held December 13, 1904, caused the following minute to be entered on its records and sent copies to the bereaved family and to the medical magazines:

"The members of the Medical Board of St. Vincent's Hospital have learned with profound regret of the death of their colleague, Dr. William R. Pryor.

"Of undaunted courage and indomitable perseverance, Dr. Pryor followed truth unflinchingly and the highest ideals without faltering. These qualities, coupled with technical skill of the first order and an unusually acute power and wide range of observation, had won for him an enviable reputation and a commanding eminence in his special field.

"His fine enthusiasm, his frankness and directness of purpose, his readiness to lend a helping hand, were enduring qualites which gained for him the highest prizes of ambition: the gratitude of his patients, the love and respect of his associates. Frederick S. Dennis, M.D., and George D. Stewart, M.D., *Committee.*"

Urgent Needs of Our Hospitals.—That there is real danger of the private hospitals of this city being forced, owing to the lack of funds, to abandon private management and rely for support on the city treasury is set forth by Frank Tucker, Vice-President of the Provident Loan Society, in an article in the last issue of *Charities*. Mr. Tucker says in part: "The critical financial condition in which many of the hospitals of New York under private management find themselves is stated in an emphatic and not to be questioned manner in the thirty-sixth annual report of the Presbyterian Hospital just issued. This hospital, one of the 'big four' in the New York hospital group, has long been noted for its progressive administration, its splendid plant, its famous training school for nurses, and its broad and liberal policy toward the sick without means to pay for medical and surgical treatment. Where is the remedy to be found? The writer again answers the question by urging the raising of a large endowment fund, the income to be used in supplementing the present incomes of the group of New York hospitals which find themselves in the same financial condition as the Presbyterian, the fund to be administered by an independent board of men and women selected for their knowledge of social conditions."

Tuberculosis Directory.—In the Directory of Institutions and Societies Dealing with Tuberculosis, which is about to be issued jointly by the Committee on the Prevention of Tuberculosis of the New York Charity Organization Society and the National Association for the Study and Prevention of Tuberculosis, the attempt is made for the first time to present a bird's-eye view of all the organized work that is being done in the United States and Canada for the care and cure of consumptives and the prevention of consumption.

The Directory is an attractive volume of 270 pages and some sixty illustrations. Part I is by far the most important section of the book, consisting as it does of descriptions and views of the 125 hospitals and sanatoriums in which consumptives may receive treatment, with short introductory articles by Dr. E. L. Trudeau, of the Adirondack Cottage Sanatorium, on "Essential Features in Sanatoriums for Incipient Cases," and by Dr. Lawrence F. Flick, of the Henry Phipps Institute, in Philadelphia, on "Essential Features in Hospitals for Advanced Cases." These introductory articles supply a standard by which the average reader can judge of the value of existing institutions in many points and they furnish suggestions to persons who are planning new ones. The descriptive list of existing institutions will be a welcome guide to the physicians and friends of consumptives, whether poor or well-to-do. The exact name and location of each hospital and sanatorium is given, and charges and other terms of admission, the number of patients received, directions in regard to applying for admission, a more or less extended description of the situation, and in many instances views of the buildings or grounds. They are arranged according to the states in which they are located, and are in this way very easy to refer to. An index further facilitates reference by classifying them according to the prices charged and according to the stage of the disease for which they are intended. The section on dispensaries is particularly interesting to charitable workers and physicians who have a large practice among the poor, for it gives the location, office hours, and other details in regard to the thirty-two special dispensaries for the free treatment of tuberculosis. The value of such dispensaries and the important features in their conduct are discussed in an article by Dr. Edward O. Otis, Superintendent of the Boston Dispensary. The rest of the book is devoted to an account of the attempts which are now being made to provide special care for consumptives in hospitals for the insane and penal institutions, with articles by Dr. J. B. Ransom, of Clinton Prison, New York, and Dr. A. E. Macdonald, formerly Medical Superintendent of the Manhattan State Hospital East; a description of a municipal system for the control of tuberculosis, by Dr. Hermann M. Biggs, Medical Officer of Health of New York City, together with a summary of the measures which are now taken in the principal cities of the country; and, finally, statements of the methods of work and plans of the thirty-eight societies for the prevention of tuberculosis, immediately preceded by an article on the need for such societies, and their function, by Edward T. Devine, General Secretary of the New York Charity Organization Society. The Directory will be of value to every

physician and social worker and to every one who comes in contact in any way with persons suffering from tuberculosis. Orders may be sent, with one dollar, to the Charity Organization Society, 105 East Twenty-second Street, New York City.

PHILADELPHIA.

New Hospital Chartered.—A charter has been granted to the West Philadelphia General Homeopathic Hospital and Dispensary, at Fifty-fourth and Girard avenues. The building now has twenty rooms, but will be enlarged.

Medical Jurisprudence Society.—At the stated meeting of this Society, held Monday, December 19, a paper was read by Dr. Charles K. Mills. The subject was, "The Forms of Insanity Due to Alcohol and other Intoxicants, with Discussion ot Some of their Medicolegal Relations."

College of Physicians.—A lengthy discussion at a recent meeting failed to result in deciding upon a site for the new building. A resolution authorizing the sale of the site previously purchased at Twenty-second and Ludlow streets was carried. The present site, to be increased by adjoining lots, is now meeting with most favor.

Endowment of University Gymnasium.—Great enthusiam was aroused at the exercises marking the completion of the new gymnasium of the University of Pennsylvania, by the announcement by Dr. White that a gift of $50,000 had been made. This amount was left by the late William Weightman, as an endowment in trust for the general advancement of physical education and athletics at the University. In honor of the donor the building will be known as Weightman Hall.

City Takes up Tuberculosis Problem.—Through the efforts of Dr. Lawrence F. Flick, the city has taken a step toward caring for its tuberculous population that is distinctly an advance. Director of Charities Martin has arranged for a special department for the care of the tuberculous at the Philadelphia Hospital and placed it in the hands of a staff of regular physicians. These are Drs. H. M. Landis, Joseph Walsh, Howard Anders, and W. B. Stanton. All are connected with the Phipps Institute and were chosen because of their experience with the disease. Each will have an assistant in the Philadelphia hospital work. Dr. Flick states that Philadelphia is now one of the best organized cities in the United States for the fight against tuberculosis.

The Canonsburg Medical Club. — Canonsburg, Washington county, enjoys the distinction of having one of the most unique Medical Clubs in existence. It meets every Saturday night, any time from 9:30 to midnight, alternately at some doctor's office. There is no constitution, no by-laws, no officers, no requirements connected with being a member, except that the member at whose office the club meets shall furnish the cigars. It has been in existence a year and is a pronounced success. It brings the doctors together for a talk, not necessarily medical, and the little petty things of the week that often rankle and sting, because misunderstood, are explained and not allowed to breed coldness. Doctors have enough annoyances without having any among themselves, and it is just wonderful how they are dissipated by a social cigar. If there were papers to read or duties to perform, the attendance might soon fall off.—*Penn. Medical Journal.*

Ideal House Described.—Dr. Robert E. Thompson, of the Central High School, in a recent lecture on "The History of the House," indicated some of the changes that will come in the house as based on a study of the above subject. The future house will contain no stoves or stairways. Housecleaning will be done by power, the dust being removed by a pneumatic exhaust system as is now in use in large hotels of modern construction. Streets will also be cleaned in like manner, the dust being removed to the country; in this way it may come to pass that country people will come to cities to get really pure air. The houses will contain elevators, heat will be supplied from a central plant and meals will be obtained from cooperative centers as is now done in certain parts of Norway. Moreover, the cooking will all be done by men who alone practice scientific cooking. Dr. Thompson incidentally said that women have no natural gift for cooking, their aim being to supply what people want instead of what is good for them.

Goiter in Pennsylvania.—In regard to the recent investigation of goiter in Northern Pennsylvania, especially Pike and Indiana counties, Dr. A. S. Ashmead writes an interesting letter to the *Public Ledger*. He has observed several cases in Pike county. In Indiana county, dwarfs and cretins are also found in the goiterous families. Dr. Ashmead says the air at the elevation of these counties is antituberculous, but there is a great strain on the circulatory and respiratory systems. The diet is mainly one of starches, and nearly every person has starch dyspepsia and a lazy temperament. Cardiac palpitation is brought on by slight exertion. The most important factor in the condition of the people, however, is that they have intermarried for many years. The thyroid shows the effect of overstrain in keeping such people alive and developing. Later the effect of this and intermarrying is seen in the appearance of dwarfs and cretins. These signs of degeneracy point to the fact that the mountaineer families in these localities are dying out; infusion of new blood is indicated.

CHICAGO.

Jewish Tuberculosis Hospital.—The building of a hospital for Jewish victims of tuberculosis has been urged by Mrs. M. J. Sturm.

To Aid Hospital Fund.—Nearly two thousand tickets have been exchanged for reserved seats for the Burton Holmes' Travelogue, "Round About London," which was given in behalf of the new Children's Memorial Hospital. Thirty boxes were sold.

Fight for Pure Drugs.—Cooperation in the prosecution of druggists who, in the future, dispense chemicals of an inferior quality was pledged by members of the Retail Druggists' Association at a meeting recently held. Resolutions were passed expressing regret that certain pharmacists have been inexcusably careless in selling spurious drugs.

Labor Unions to Join Fight Against the Spread of Consumption.—Labor unions have been enlisted to fight the spread of tuberculosis. The office janitors, cigar makers and garment workers recently offered their cooperation in efforts which are to be made to minimize dust in downtown buildings, and unhealthy conditions in shops and factories.

Preservatives in Food Products.—Dr. Edward Gudeman, at a recent meeting of the Chicago Section of the American Chemical Society, pointed out in a paper inconsistency on the part of the government in allowing the use of preservatives in imported foods, and agitating against them in home products. A label to mark artificially colored food was advised.

Mortality of the Week.—According to the weekly bulletin of the Department of Health, during the week ended December 10, there were 512 deaths reported, 35 of which were holdovers from November, making

the net deaths 477, and the annual death rate 12.89 per 1,000. Pneumonia heads the list with 85; consumption follows with 65; then come heart diseases and violence, 50 each, and Bright's disease, 41.

Annual Report of Chicago Lying-in Hospital.—The ninth annual report of this institution has just been issued. Besides $4.096 in cash donated by friends toward current expenses, the Associated Jewish Charities continued its subscription of $3,000 toward the expenses of the Maxwell Street Dispensary, and large additional sums were expended on the new building, which, with the land, represents an unencumbered outlay of $20,724.68.

Physicians for Work at Cook County Hospital.—President Brundage announces the nominating commission to select the attending staff of Cook County Hospital as follows: Drs. Chas. S. Bacon, Frank Billings, Daniel R. Brower, H. O. Brown, Sanger Brown, Thos. J. Conley, A. C. Cowperthwaite, Nathan S. Davis, Joseph B. DeLee, Fernand Henrotin, F. C. Hotz, Stewart Johnston, John B. Murphy, Hugh T. Patrick, Chas. E. Paddock, Wm. E. Quine, E. M. Reading, Nicholas Senn, Geo. F. Shears, H. M. Starkey, D. A. K. Steele, Jas. H. Stowell, Henry S. Tucker, Chas. S. Williamson and Casey A. Wood. The commission will proceed to select the membership of the staff at the County Hospital, and will present to the President of the Board their choice of candidates.

CANADA.

Annual Report, Toronto Home for Incurables.—The thirtieth annual report of the Toronto Home for Incurables states that there are at present in that institution 111 patients, 38 having been admitted during the past official year. Thirty-six deaths have occurred and twelve left the Home very much improved in health. The Training School for Nurses, established in January, 1903, has proved a success. The total expenses for the year amounted to $28,233.05. The inmates are divided into 57 women and 54 men. Of the former, the oldest is ninety years, and the youngest twenty-one. Of the men, the oldest is seventy-nine and the youngest seventeen. Of the total number paralysis claims 39 and rheumatism, 27.

New Brunswick Provincial Hospital for Insane.—A special commission, consisting of Dr. J. V. Anglin, the newly appointed Superintendent of the New Brunswick Hospital for the Insane, Dr. G. A. B. Addy and Dr. A. F. Emery, of St. John, have been examining the patients in this institution, the object being to relieve overcrowding from which the institution has suffered for some years past. There are at present 554 patients in the hospital, and a careful examination of all these is being made, so that the harmless insane may be removed to other institutions and thus provide accommodation for the more acute cases which can thus be better treated. Dr. Anglin will also press for reform in the matter of the admission of patients, and hereafter no patient will be sent into the hospital without the Superintendent first advising that there is proper accommodation for the care of such patient.

Alexandra Hospital, Montreal.—Through the generosity of Mr. James Ross, Montreal, the work of the erection of the Alexandra Hospital, Montreal, will be at once proceeded with. By the terms of agreement over a year ago the Trustees of the Protestant Hospitals of Montreal, were to have in readiness for the reception of cases of infectious and contagious diseases the new hospital to be known as the Alexandra Hospital. A site was secured at a cost of $90,000, but the erection of the building could not be proceeded with owing to the lack of funds. Recently the Hygienic Committee of the City Council of Montreal called a conference of the Trustees of the Protestant Hospitals, the object being to come to an understanding as to the cause of the delay. At this meeting it was decided to call a mass meeting of citizens and to procure contributions, when, if the proper response were forthcoming, work could go on and the new hospital erected for the reception of patients by September of next year. Dr. Roddick presided at this meeting, at which Mr. Ross promised $25,000 and other citizens handsome amounts, bringing the sum up to $62,500 available for the commencement of the work. When completed the hospital will cost in the neighborhood of $200,000.

GENERAL.

New Medical Building at Ann Arbor.—The ceremonies of laying of the corner stone of the new building for the Michigan College of Medicine and Surgery occurred on December 13. The edifice occupies a commanding site at the corner of the University Campus and is a worthy companion of its neighbors.

Plague Stops Army Coats.—The Governor of Viatka reports a serious outbreak of Siberian plague in factories in the districts of Viatka and Slobodski, which are preparing fur coats for the troops in Manchuria. Two hundred and forty-seven cases have already been reported. The plague has been traced to sheep skins, and the delivery of fur garments to the Russian troops has been suspended.

Patriotism in Hungary.—The Tuberculosis Sanatorium, named after the late Queen Elizabeth, proving too small to accommodate the hundreds of applicants, the committee resolved to erect two new sanatoriums in the healthiest regions of Hungary. In order to raise funds for this grand undertaking one million lottery tickets were issued at $1 each. The sympathy of the public for this measure has been so great that all the tickets were disposed of within one month. Premiums even were offered at double the price after the tickets were all sold.

Famine Threatened in Ireland.—With reference to the resolutions adopted at a meeting of the Irish Parliamentary party in Dublin, on December 16, calling upon the government to extend aid and institute works to afford employment for those in the West of Ireland who have been rendered destitute by the failure of the potato crop, the Irish Office here states that while there has been a partial failure of the potato crop in Ireland, government returns show that the distress, if it occurs, will not be acute before the end of January. Meanwhile the government is taking steps to prevent a famine.

Substitute Drug Poisoners.—Testimony by laboratory experts before the United States Commissioner's Court, sitting in Chicago, on December 17, in a hearing on criminal charges brought out the assertion that certain drugs sent about the country by alleged fraudulent mail order men endanger public life and health. Dr. John A. Wesener, of Columbus University, said a package which he had examined, marked as containing trianol, contained acetanilid. The substitution of acetanilid, grain for grain, for trianol, said the witness, "would in many instances produce acetanilid poisoning and death."

Fourth Pan-American Medical Congress.—The details of the program for the entertainment of those attending the Pan-American Medical Congress are as follows:—January 3.—On their arrival at Colon by special train the Medical Committee will receive the American delegates and accompany them across the isthmus. Registration will be followed by a reception

at the Presidential residence, and the opening session will be held in the evening. January 4.—Excursion and lunch, followed in the afternoon by section meetings with a banquet in the evening. January 5.—Excursion to Tabago Island and Panama Bay; in the afternoon addresses on hygiene, medical and surgical, and in the evening a ball at the International Club in honor of the delegates. January 6.—Excursion on the canal zone, visiting the great Culebra cut and important sections; in the afternoon a section meeting and the closing session.

New President of the Carnegie Institute.—Dr. R. S. Woodward, Dean of the School of Pure Science of Columbia University, New York City, was elected President of the Carnegie Institute, at a meeting of the Board of Trustees, held on December 13, in Washington. He will succeed Dr. D. C. Gilman, the ex-President of Johns Hopkins University, who has resigned. Dr. Woodward is well known as an educator and scientist, and when formerly in that city was connected successively with the Coast and Geodetic Survey and the Geological Survey. Dr. John S. Billings, of New York, and Dr. Charles D. Walcott, the Director of the Geological Survey, were re-elected members of the Executive Committee of the Board of Trustees. Dr. Woodward will not assume his new office until the close of the present university year, and perhaps not until later. Dr. Gilman, in his letter of resignation, gave as his reason for his action the fact that he had passed the age of seventy years and was looking forward to release from serious official responsibilities. He expressed his continued interest in the development of the institution, which, he wrote, "bids fair to be a most potent factor in the advancement of knowledge and in the encouragement of scientific men."

Dr. Howard's Joke on the President.—A recent call made by Dr. William Lee Howard, of Baltimore, at the White House, reminds him to relate this story: "A few years after Mr. Roosevelt left Harvard," said Dr. Howard, "I was living with his Harvard chum in bachelor's quarters on Washington Square, New York. We were medical students at Columbia University. My friend studied too hard and became very ill. There were some doubts about the diagnosis, so we were quarantined. The late Dr. Cyrus Edson and myself were left as nurses for the sick man. C.'s illness continued and was a puzzle to the many eminent physicians who called daily and who constantly congratulated Edson and myself on our faithfulness; but all seemed to forget that we were tired and hungry young men, and the little food we obtained at the restaurants around Washington Square was not to our satisfaction. Remember, C. had to be artificially fed on liquids. One day there was a gentle rap on the door, and upon opening it I was asked in a pleasant voice if C. W. lived there. Then he gently inquired after him, telling me to tell C. that he, Teddy Roosevelt, had called. As he turned to go he stopped and asked if there was anything he could do for C. How was he off for delicacies, wines, etc. Well, I jumped at the chance, and just what I told him I don't remember, but he certainly did not know much about illness, as on the following day there was delivered at our door a large hamper from Theodore Roosevelt, with a note expressing the hope that the patient would enjoy the good things. And those things were good—chickens, pates, guava jelly, hothouse fruit, champagne and Burgundy. Well, Edson and I did not go out for the frankfurters that day or the next. Three days later Mr. Roosevelt again called, and I am ashamed to tell what a con game I gave him about C. getting better; how the delicacies were devoured with eagerness—they were—and with such food C. would soon get well. Remember, the ill man was unconscious of all his surroundings and was being nourished by artificial means. Mr. Roosevelt went away, saying he would tell his sister to send down a hamper; also, some of his Harvard friends would be informed of what was needed. Well, Dr. Edson and I got so fat that by the time C. was able to be moved to Boston we had to get new clothes."

International Medical Congress.—Dr. J. H. Musser, President of the American Medical Association, at the request of the Secretary of the International Medical Congress, which meets in Lisbon in 1906, and on approval of the House of Delegates, has appointed the following members of the American Committee of Arrangements: Drs. Frank Billings, Chicago; Hermann M. Biggs, New York; Herbert L. Burell, Massachusetts; William T. Councilman, Boston; Wm. H. Carmalt, Connecticut; Richard C. Cabot, Massachusetts; N. S. Davis, Jr., Illinois; Chas. H. Frazier, Philadelphia; R. H. Fitz, Massachusetts; W. E. Fischel, Missouri; Chas. Lyman Greene, Minnesota; Ramon Guiteras, New York; H. A. Hare, Pennsylvania; L. Hektoen, Chicago; Edward Jackson, Denver; E. J. Janeway, New York; A. Jacobi, New York; George Ben Johnston, Richmond, Va.; W. W. Keen, Philadelphia; Howard A. Kelly, Baltimore; Chas. Kollock, South Carolina; L. S. McMurtry, Louisville, Ky.; James H. McBride, California; A. T. McCormack, Bowling Green, Ky.; K. A. Mackenzie, Portland, Ore.; John Herr Musser, Philadelphia; J. B. Murphy, Chicago; R. Matas, New Orleans; William Osler, Baltimore; Chas. Powers, Colorado; J. B. Roberts, Pennsylvania; W. L. Rodman, Pennsylvania; M. H. Richardson, Boston; Chas. A. L. Reed, Ohio; H. M. Sherman, San Francisco; Frederick C. Shattuck, Boston; Geo. H. Simmons, Chicago; Chas. G. Stockton, New York; Geo. Sternberg, Washington, D. C.; Victor C. Vaughan, Ann Arbor; John A. Witherspoon, Tennessee; J. Collins Warren, Massachusetts; J. C. Webster, Chicago; Wm. H. Welch, Baltimore; John A. Wyeth, New York; the Surgeon-Generals of the Army, Navy and United States Public Health and Marine-Hospital Service; the presidents of the American Ophthalmological, Otological, Gynecological, Physiological and Pediatric societies; the presidents of the American Dermatalogical, Laryngological, Surgical, Climatological, Neurological, Medico-Psychological and Orthopedic associations; the presidents of the Association of American Anatomists, Association of American Physicians, American Association of Genito-Urinary Surgeons, American Association of Pathologists and Bacteriologists, New York Academy of Medicine, College of Physicians, Philadelphia, Cook County Medical Society, Chicago, and the Society of Medical Improvement, Boston.

OBITUARY.

Dr. CLARENCE WILLARD BUTLER, one of the most prominent physicians of Montclair, N. J., died at his home in that place, December 20, from cancer. He was born in Bellevue, Ohio, in 1848, was educated in Oberlin College and the Homeopathic College in New York, and had been in active practice in Montclair since 1872.

Dr. CHARLES K. LAW, thirty-six years old, died at his home, 82 Glenwood Avenue, Jersey City, N. J., December 13, from peritonitis. He was a graduate of the University of New York and received his medical degree in 1893. He was a member of the University Club, the Jersey City Practitioners' Club, and of the Hudson County Medical Society.

Dr. CLARENCE S. ELEBASH died on December 20, after a three months' illness which originated in an attack

of typhoid fever. The fatal ending was feared, and his friends declared he was a martyr to duty. Dr. Elebash's city home was at No. 118 East Nineteenth Street, and he was a well known specialist in diseases of the eye. For years he was the head of the medical department of the Brooklyn Heights Railroad Company. He was forty-five years of age, a native of New York, and had practised in this city since his graduation from the New York University Medical College in 1891.

Dr. SAMUEL HEMINGWAY, well known in New York a few years ago in medical circles, died December 18, from heart disease. He was fifty years old and a bachelor, and spent most of his time at his country place, in Oceanic, N. J. He gave up active medical work when only forty years old. When ambulance surgeons were new to New York, thirty years ago, Dr. Hemingway, who was then taking his hospital course after graduation in medicine, was one of the first. He was attached to the old Park Hospital, and made hundreds of runs on accident cases when hardly one out of a hundred persons knew that such a system was in operation and when the ambulance surgeon often had to battle for his own safety against the prejudices of ignorance in order to give needed surgical attention.

Dr. WILLIAM M. L. FISKE, of Brooklyn, died December 21, at his home, No. 1140 Dean Street, that borough. His death was caused by an affection of the heart, from which he had suffered for four years. Dr. Fiske was born in New York in 1841. He first entered Bellevue Hospital Medical School, but left in 1862 to enlist in Company A of the Forty-seventh Regiment. He returned to the school later, and was graduated in 1863, afterward graduating from the New York Homeopathic College in 1864. He was then appointed assistant surgeon in the United States Army, and served in that capacity till the end of the Civil War. Dr. Fiske was for many years president of the staff of the Brooklyn Homeopathic Hospital, and was one of the founders of the Eastern District Hospital. He was one of the organizers of the Training School for Nurses of the Brooklyn Maternity Hospital, and was president of the New York State Homeopathic Society. At the time of his death he was one of the Board of Examiners of the Board of Regents.

Dr. D. M. ECHEMENDIA, who died in Havana, Cuba, December 20, from a malignant fever, was formerly a noted yellow fever expert, and during the American occupation of Cuba did good work in driving the yellow fever from Havana. He was a surgeon of the United States Marine Hospital Service. During the Cuban revolution, in 1896, he was quarantine officer for the Florida State Board of Health, in charge of the Mullett Key station in Tampa Bay. On one occasion a Spanish cruiser passed the station en route to Tampa from Havana and paid no attention to the signal to stop and undergo inspection. Dr. Echemendia, who was a native of Cuba, became wrathful when he saw the ship flying the flag of the red and gold ignoring the orders of the State of Florida. He boarded the quarantine launch and overtook the cruiser before she reached Port Tampa. There was a lively interchange of compliments in the Spanish language, and the angry doctor ordered the vessel to return forthwith to Quarantine. The Spanish captain was indignant and protested that a State quarantine could not apply to a Spanish war ship. Dr. Echemendia was firm, and was backed by the State Health Office. The vessel later put to sea without touching at any Florida port. The Cubans in Florida have always declared that Dr. Echemendia was the only Cuban or American who ever captured a Spanish war ship single handed, and he was held in the highest esteem by them. Dr. Echemendia did good work in Florida during the yellow fever epidemics in 1887 and 1888.

CORRESPONDENCE.

OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, December 3.

THE GENERAL MEDICAL COUNCIL—THE SCOTTISH UNIVERSITIES—BRITISH NEGLECT OF SCIENCE—THE HEALTH OF THE NAVY—MISCELLANEOUS.

DR. DONALD MCALISTER, of Cambridge, has been elected President of the General Medical Council in succession to Sir William Turner who has, like Cincinnatus, returned to his cabbages. Dr. McAlister, who must not be confounded with his more famous cousin, Dr. Alexander Macalister (the difference in regard to the "Mac" has been adopted by mutual consent for the purpose of differentiation) who is Professor of Anatomy in the University of Cambridge and a learned Egyptologist besides. Dr. Donald McAlister distinguished himself as a student by coming out at the top of the Mathematical Tripos. There is nothing that Cambridge venerates so much as a Senior Wrangler, the name given to the first mathematician of the year. There is a story that a man who had achieved that greatest of academic honors celebrated his triumph by going to the opera. He entered a box just as some august Royal personage entered one on the other side of the house. The audience cheered as is the wont of Britishers when royalty condescends to honor an entertainment with its presence. The Cambridge man, with all his blushing honors fresh upon him, took the applause as intended for himself and bowed most graciously, whispering at the same time to his friend "I did not think they could have known of it already!" Cambridge men take this story seriously and check the laughter of the profane by saying that it was a very natural mistake as it is quite right that a Senior Wrangler should receive royal honors. Dr. Donald McAlister has lived at Cambridge all his professional life. He has not made any particular mark as a physician, thus verifying, to some extent, the common saying that Senior Wranglers are never heard of in after life. He was, it is understood, bitterly disappointed that he was not appointed Regius Professor of Medicine instead of Dr. Clifford Allbutt. He has, however, a considerable academic position. He is Linacre Reader of Physic in the University and Senior Tutor of St. John's College. He has the reputation of a first-rate man of business. He has represented his University on the General Medical Council for a number of years and his influence has always made for moderation and statesmanlike breadth of view in the deliberations of that assembly. His sober good sense has been as a brake to the reckless driving of Sir Victor Horsley. The latter is a type of the *idéologues* so despised by Napoleon. Such power as he has is destructive; McAlister, on the other hand, is nothing if not practical and constructive. It is owing mainly to him that Horsley, who entered the Council as a kind of elemental force, amid the shouts of the professional Demos, is now, to use Disraeli's phrase, an almost extinct volcano. It is rumored that at the end of his term Horsley will not offer himself for re-election. This, if true, may be taken as a confession of failure.

One of the matters debated by the General Medical Council was a report by the visitors and inspectors of the Council, on the final examinations of the University

of Edinburgh. In that report the inspectors "felt obliged to criticize unfavorably some of the arrangements and methods of the examination in clinical surgery." Attention was called to the ignorance of surgical pathology shown by the candidates, to their apparent want of training in clinical observation, and to their lack of practical skill in operative surgery. Summing up their conclusions the inspectors remark that "it is to be assumed that the University authorities desire the degree to be a high one; at present this can hardly be said to be the case." The report led to a heated discussion in which Sir William Turner descended from the Olympus of the presidential chair and entered the arena as a combatant in defence of the University of which he is the representative. Sir John Batty Tuke, another Edinburgh man, also flourished his claymore at the audacious "Southrons" who dared to breathe a word against the fair fame of Scottish universities. The inspectors, however, stuck to their guns. It was an amusing though not altogether an edifying scene. The Scottish thistle is proverbially not to be handled with impunity and the Caledonian stern and wild is especially touchy about his universities. He has good reason to be proud of them but he insists on their being regarded as sacred. The University of Edinburgh in particular, looks upon itself as sacrosanct—indeed as an ark of the covenant not to be touched by profane hands. A year or two ago the *British Medical Journal* published a letter in which it was hinted that the teaching in that famous seat of learning was not all that it might be. The same thing was being freely said in much stronger terms in the Edinburgh papers, but it was felt to be an intolerable insult that any criticism of a Scottish institution should appear in a journal published in England. The heather was on fire, and Edinburgh men clamored for some one's head. Many years before the same journal had allowed itself to indulge in some extremely gentle criticism of the University of Edinburgh, and the offence has never been forgiven. At any rate this is the explanation given of a certain aloofness in regard to the British Medical Association, which has become traditional in the city that delights to call itself the "modern Athens." As for the report of the inspectors of the General Medical Council, rightly interpreted, it is a thing of little moment. As has been said in former letters, a system of reprisals has been in vogue for some time past, which goes far to deprive these reports of any real significance. English inspectors have adversely criticised the examinations of Irish Universities and Colleges. Irish inspectors have retaliated by condemning English universities, including even Oxford and London. Scotchmen have given thanks that their schools were not even as those of the English and Irish. This pharisaic attitude has had its natural result. The true value of the criticisms of the surgical examinations of the University of Edinburgh may be gathered from the fact that the inspector, Mr. Thomas Bryant, formerly Surgeon to Guy's Hospital, has not, it is said, been inside a surgical ward for fifteen years. Only a few years ago, speaking of the same University, he reported that the entire examination in clinical surgery was a most complete, searching and practical one." A frank account of the more recent experience which has led him to change his mind would be interesting.

The annual dinner of the students, past and present, of the Medical School of the University of Birmingham, took place on November 30. Sir Frederick Treves, in proposing the toast of "The Medical School," said it used to be considered that a university could not be good unless it was old and located in some quiet place far from the haunts of men. But times have changed. A university, to be a success in science, at any rate, must be young and must be situated in a great city like Birmingham. Whatever the theoretical value of Latin and Greek, the thing of absolute importance in these days was applied science. It was to be regretted that very little heed was given to science in this country. All the great advances in medicine and surgery had been made by men who had worked for positively nothing and had made a present of their discoveries to the world. There was a sort of Free Trade practice which left the medical discoverer at the mercy of everybody. It would be a very good thing if some kind of fiscal policy could be introduced by which those who taught science in this country could be placed in a similar position to that occupied by those in Germany or America. Mr. Chamberlain (Chancellor of the University), who proposed the toast of "The Past and Present Students of the Medical School," said he had never seen so many medical students together before. He had been examining them with great interest. He thought there was a lingering suspicion in the minds of the public that as a class they might still be considered as fairly represented by those world-known portraits of Mr. Bob Sawyer and Mr. Benjamin Allen. But if that was the public view the public were very much mistaken. He went on to say that three classes of people were essential to the success of a modern University. There were, first, the students, who would always be with us. In the second place, there were the teachers. It was upon their energy, their capacity, their knowledge, and their distinction that reputation of the University would always depend. Lastly, there was a third class, and the third class was at least as important as the other two. That was the class that was known as the "pious benefactor" that was a species which was undoubtedly much too scarce in these days. In the United States, through munificent donations to be counted by millions, they had covered the land with a network of Universities which had brought higher education within the reach of almost every citizen. He hoped the time was coming when those in this country who had more than they wanted would be content to dispose of more of their wealth in the shape of contributions to such institutions. He had heard—he did not know whether it was a superstition—that sometimes gentlemen in the medical profession were consulted by their patients and friends as to the disposal of such surplus. If it were the fate of any past or present student to enjoy such confidence he hoped he would gently insinuate that, if his patient or friend desired undying renown and the gratitude for all time of generations to come, he could not do better than to enable them to supply what was at present their greatest deficiency and to establish in Birmingham in connection with their University a great medical school of research.

The Director-General of the Medical Department of the Navy, in his annual report to the Admiralty, issued on November 28, states that the aggregate number of cases of disease and injury recorded last year furnished a ratio of 831.57 per 1,000, which showed a decrease of 29.56 per 1,000 compared with the ratio of 1902, and a decrease of 48.06 contrasted with the average of the last six years. The invaliding ratio of the total force—viz., 24.03 per 1,000—showed a decrease of 5.93, and the death rate, which was 4.19, showed a decrease of 1.73 per 1,000, and was the lowest recorded since 1856. Only two wounds in action are recorded, with one death, which occurred on the East Indies Station, when the Mohawk landed a force to punish the chief of the

village at Durbo, Italian Somaliland. The total force serving afloat last year was 103,100, the total number of men sick daily was 3,633.54, and the total days' sickness on board ship and in hospital was 1,326,244, representing an average loss of service from disease and injury of 12.86 days for each person. Enteric fever shows a slight increase of .15 per 1,000 of cases, but the deaths during the year were fewer by seven than in the preceding year. Ten cases of plague are recorded as having occurred on the China Station, none of which proved fatal. There was only one case of cholera. There were 17,295 cases of wounds and injuries and 129 deaths, as compared with 16,389 and 225 deaths in the previous year. Sixteen men committed suicide.

The King has subscribed $250 and the Queen $500 to the fund being raised by a British Committee toward a memorial of the late Professor Finsen, of Copenhagen.

Dr. A. W. Wigmore, who went through the Bankruptcy Court the other day, stated that he was an X-ray expert, and attributed his failure to the "slump" which has taken place in that line of practice owing to the scare (referred to in a recent letter) produced by the reports of injurious effects caused by the Roentgen rays that have appeared in the newspapers.

Dr. Achille Vintras, founder of the French Hospital in London, who died two or three weeks ago, was a highly respected physician, in speaking of whom the epithet "blameless" applied by Homer to prophets, naturally rises to the lips. He was the son of a somewhat remarkable man who, if not blameless, claimed to be a prophet. Vintras *père* was the son of a washerwoman of Bayeux in Normandy. After a youth of poverty and adventure he heard voices which told him he was the prophet Elias. He founded a new religion, but less fortunate than Dowie, his tub-thumpings alarmed the French Government, and he was put in prison where he remained till 1848; the personal intervention of Crémieux was required to set him free. Disgusted with his inappreciative countrymen he founded a church in England, but went back to France where he died in 1875.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, held November 16, 1904.

The President, John B. Murphy, M.D., in the Chair.

Advantage of Muscle-Splitting and Muscle-Retraction Incisions in the Prevention of Ventral Hernia.—Dr. Martin B. Tinker, of Ithaca, N. Y., read a paper (by invitation) on this subject, saying that the very considerable number of ventral hernias, following clean, uncomplicated abdominal operations, which probably come to the notice of every surgeon in active practice, should furnish ground for reflection as to the necessity for their occurrence. The number of these cases, which have come to him during the past year, has formed almost four per cent. of his total number of cases, and his previous experience has led him to believe that the patients seldom return for the cure of their hernia to the surgeon who performed the original operation causing the hernia. The state of many of these patients, with their constant discomfort from wearing some form of abdominal support, with pain from adhesions about the hernial opening, and with the not infrequent occurrence of symptoms of strangulation, often makes their condition but little preferable to that for which the original operation was undertaken. To avoid the disadvantages of the rectus incision, especially the paralyzing of the median side of the muscle, Lennander in 1898 introduced the rectus retraction incision. In 1900 Pfannenstiel introduced his supra-symphysarian cross incision, which gives free access to the pelvis and organs near the median line of the body. In opening the abdomen for pelvic operations of any kind, the speaker usually employs the Pfannenstiel incision, although if freer exposure is desirable, the Lennander incision is preferable. The Pfannenstiel incision has the possible additional advantage of placing the scar below the pubic hair line, where it is not noticeable. It will be found very satisfactory for myomectomy; operations on the tubes or ovaries; advancement of the round ligaments for backward displacement, or other operations near the median line of the lower part of the abdomen. For abdominal hysterectomy the Lennander incision gives better exposure. For exploration of the right iliac fossa, where some involvement of the pelvic organs is suspected, he also prefers the Lennander incision. Where simple appendectomy is to be performed, he thinks nearly all surgeons agree that the McBurney muscle-splitting incision is preferable, but when appendectomy is combined with work in the pelvis, the Lennander incision is preferable. Operations in the upper abdomen are far less likely to be followed by postoperative hernia, but, as Richardson recently pointed out, the muscle-splitting incisions in the treatment of diseases of the gall passages afford far greater security against the occurence of ventral hernia. There are undoubtedly other features of great importance in the prevention of ventral hernia. Healing by first intention is of first importance; the specially careful arrest of hemorrhage to prevent accumulation of blood in the wound, not only lessens the danger of infection, but favors firm healing. The prevention of strain on the wound after operation by distention is also very important. Undoubtedly the accumulation of intestinal gases can be greatly lessened, if not entirely prevented in most cases, by thoroughly emptying the intestinal tract before operation, and by careful attention to the bowels after operation. The avoidance of any strain on the wound by preventing postoperative nausea and vomiting was important, also the prevention of strain on the wound by the patient exerting himself too early. The possibility of getting the patient out of bed at an early date following operation with a feeling of absolute security from hernia, and without the necessity for wearing a binder, is a great satisfaction and sufficient reward for the extra pains and few additional minutes of time required to open and close the abdomen by any one of these methods.

The Kocher Method.—Dr. L. L. McArthur thinks that to Kocher, above all modern teachers, is due the credit for presenting in a systematic manner the best lines of incision to follow. These are prettily illustrated in his work on operative surgery, particularly in the early editions thereof, in which he describes the lines of cleavage. These lines of cleavage bear a relationship always to three factors, to those lines in which the least tension would occur, to those in which the least destruction of muscular fiber or actual paralleling of muscular fiber will occur, and finally an important factor of those incisions in which the innervation of these muscles involved shall not be disturbed. He is very much surprised that in any man's statistics, on careful investigation of the through-and-through suture in the linea alba in uncomplicated cases, where drainage has not been necessary, that as large a per cent. as one in five, or twenty per cent. of the hernias, should occur. It may be explicable on the basis that patients do not return to the surgeon who has been the cause of the

hernia. He thinks a very decided improvement on an incision known as Kämmerer's is one at the edge of the rectus, where occasionally one finds it necessary to go into the pelvis for complications in operations which are associated with appendical work, as, for instance, ovarian tumor, suppurative tubes, twisted ovarian pedicle, etc.

Dr. Bevan's Procedure.—Dr. Arthur Dean Bevan agreed with the essayist as to the importance of planning incisions so as to reduce the dangers of resulting postoperative hernia to a minimum; but there are a number of factors which must be considered in planning an abdominal incision. First, and most important, is to plan the incision so as to give free and sufficient exposure to do the operation. Second, plan the incision so as to give the least possible danger of a resulting hernia. If one is opening the abdomen to remove a large fibroid of the uterus, he could not employ the Pfannenstiel incision. If he is opening the abdomen to remove a large spleen, he cannot employ the muscle-splitting incision. If he is opening the abdomen posteriorly, to remove a large tumor of the kidney, the muscle-splitting incision is out of question. Furthermore, if he is opening the abdomen to operate upon the common duct, the muscle-splitting incision is out of the question, and should not be considered. The muscle-splitting incision has little value in operations on the kidney. An incision can be planned for the exposure of the kidney which is parallel with the nerves of the region of the abdominal wall, and yet not be a muscle-splitting incision. There is very little danger of hernia in a properly planned kidney incision, which divides the external oblique, the internal oblique, and transversalis fascia, but which does not interfere with the nerve supply or arterial supply of the abdominal wall posteriorly. Incisions in the posterior portion of the abdominal wall, and the upper portion of the abdominal wall, are not nearly as apt to be followed by hernia as incisions in the lower portion of the abdominal wall. An oblique incision parallel with the costal arch in the upper abdomen, which divides nerves, muscle fibers, or fibrous tissue transversely, is not nearly so apt to be followed by hernia as a muscle-splitting incision in the lower portion of the abdominal wall. It is rare to have a hernia following an incision parallel with the costal arch for gall-bladder work. He is very fond of muscle-splitting incisions, and employs them wherever he can do so. He does not think, however, that the point should be emphasized to employ these incisions where other factors are more weighty. An incision in the median line, in the linea alba, is a very safe and useful one, and he employs it quite extensively. He thinks that the statistics of seven per cent., or twenty per cent., are altogether too great. Why should one have a hernia in a midline incision of from three to six inches in length which heals by primary intention, and where the patient has been allowed to remain in the recumbent position until wound healing is complete? He is rather impressed with the fact that the German surgeons have more hernias following their operations than American surgeons. He called attention to the fact that the statistics of operations, for instance, from the Heidelberg Clinic, by Czerny, which have been extensively reported in the *Beiträge zur klinischen Chirurgie* for the last four or five years, show the proportion of hernias to be from 20 to 25 per cent. in suppurative cases. This percentage would be considered large in America. The length of the incision is of comparatively small importance as compared with primary wound healing. The recumbent position should be maintained until wound healing is complete. He has no sympathy whatever for the proposition of having a patient get up on the second day after a muscle-splitting incision or not.

Dr. E. Wyllys Andrews said he had supposed until recently that the Pfannenstiel incision was a skin incision only. He has only used it a few times, and believes it is used almost solely in the case of young women, and generally unmarried women so as to be covered by the pubic hair afterward. Personally, he likes to go one-half or three-quarters of an inch out from the median line and secure muscular wall for the incision. He attaches a good deal of importance to the imbrication idea even in ordinary celiotomy.

German Statistics.—Dr. A. J. Ochsner agreed with the previous speakers regarding German statistics, and said whoever has witnessed these clinics, from which these statistics were taken, knows that several things were done which must result in bad unions. First, the incision is made very long usually; second, the tissues are handled roughly; third, the stitches are applied with the least possible amount of care and accuracy; fourth, they are tied so tightly that they tend to cause pressure necrosis. All of those factors were bound to cause ventral hernia. He ventured to say that there is not one-fourth of one per cent. of ventral hernia possible, provided the conditions he had mentioned were carried out. He has followed many hundreds of his cases, and in those in which there was no drainage or suppuration there was no ventral hernia. One cannot get a ventral hernia if the different layers are accurately and properly approximated. He places a silkworm-gut suture down through the transversalis fascia as an emergency suture, so that if the patient should sneeze severely at the time when the catgut has become softened, there will be a safety suture on the outside to hold it. He sutures the peritoneum and transversalis fascia together; he passes a second catgut suture through the muscle, and a third catgut suture through the aponeurosis of the external and internal oblique, and after all ties the silkworm-gut suture sufficiently loosely to guard against pressure necrosis. Furthermore, he applies for emergency's sake again broad adhesive strips, so that if the patient should strain, vomit severely, or sneeze, the soft tissues would not be torn. He takes the additional precaution of always emptying the bowels thoroughly before operation, and of keeping them moved always so as not to cause a great amount of intra-abdominal pressure.

The Median Incision.—Dr. E. C. Dudley said the probabilities are that the most practical single incision for exploration is one that is made near the median line. He is inclined mostly to use a median incision and a lateral median incision for pelvic work and for appendicitis work, with a lateral incision for simple appendicitis work, and an incision in the region of the gall-bladder, because the greater part of his surgical work has been done in these three regions. He makes his so-called median incision through the right rectus muscle, parallel with the fibers of the muscle, somewhere near the inner margin of the muscle. This is done in order to avoid ventral hernia or to get a more accurate closure. For many years he has abandoned the through-and-through suture, and has used chromicized catgut, suturing layer by layer, first the peritoneum, the posterior fascia, the anterior fascia over the rectus muscle, and then, if there was a great deal of subcutaneous structure, sutures through that, and then inserts a buried suture for the skin.

Dr. William Cuthbertson stated that Pfannenstiel recognizes the limitations of his own incision, which is applicable to the removal of large tumors or of ap-

pendices complicated by some pelvic difficulty where there may be a short mesoappendix or cecum. He agrees with Dr. Bevan in reference to the after-treatment. One point seems to be lost sight of by some practitioners, namely, the complete wound healing after operation in the abdominal cavity. The experiments he has made on dogs in the past directed his attention particularly to this fact, that after having opened the abdomen of the dog, forty-eight hours later, it was quite easy to open the wound by simply pressing the finger through the line of incision. In from four to five days it was hard to open the skin incision with the finger, and it usually required the handle of a scalpel, a Kocher dissector, or a moderately sharp instrument to reopen the skin incision. After having gotten through the skin, it is an easy matter with the finger to separate the abdominal muscles and reenter the abdominal cavity. In all cases of abdominal operations we should not be in such a great hurry to get patients out of bed unless they are old and feeble, but to give them a longer time to let wound healing be complete. Furthermore, to have thorough hemostasis before closing the abdominal wound, and not leave so much blood clot between the surface of the wound to become organized.

Dr. Carl Beck has had experience with the incisions of Pfannenstiel and Küster. German surgeons publish a larger number of statistics than do Americans, because they keep more exact clinical records. If patients in America have hernia they do not return to the clinics as do the patients in Germany, and consequently hernias do not appear to American surgeons as such afterward, but they go to other surgeons. The percentage of hernia, therefore, following operations in America is much greater than would appear from what has been said. Secondary union is largely due in many instances to poor hemostasis in closing the abdomen. Blood clots are formed, and there are accumulations of blood which, with germs or foreign bodies in catgut or silk, cause an aseptic suppuration, and from this secondary union takes place. He has removed large tumors through a small transverse incision because one can stretch the incision. The muscles are not split, but simply the fascia. There is one disadvantage connected with this method, namely, that large surfaces are opened, and if exact hemostasis is not applied secondary union is invited, which can be avoided in the other incision by putting in a number of sutures of catgut or of silk. Formerly he had a number of suppurations, but latterly he had been able to avoid this by putting in drainage in the septic cases clear down to the surfaces that had been divided. With the addition of tubal drainage, one can employ this incision satisfactorily, and can avoid hernia.

Dr. Albert Goldspohn said, his own impression is that the percentage of hernia is far less than that mentioned, and from his own experience he was inclined to regard it as almost a closed chapter. The cardinal principles of closure of wounds must be carried out, or there will be a hernia. He described a technic similar to that of Dr. Ochsner, with the exception that he does not find it necessary to open the sheaths of both recti, but severs one rectus muscle and opens one sheath only, not splitting the muscle, but separating it from the linea alba, and then uniting it with a few through-and-through sutures to guard against the accumulation of serum or of blood between the layers of the wound.

Dr. Tinker, in closing, said he would not have any of the members believe that he advocates these incisions for all kinds of surgical work. No one recognizes their limitations any more clearly than he does. He also agrees with the gentlemen that certain operations cannot be performed with the use of the incisions which he had advocated. The Pfannenstiel incision has many of the advantages he had spoken of. It is not his custom to allow patients to get up in less time than a week, and usually not until ten days after operation. Healing is not likely to be complete until that time; but he does feel perfect confidence in allowing a patient with one of these incisions to get up at the end of two weeks at the latest, without the use of any binder; and he has yet to see any evil results following it.

NEW YORK NEUROLOGICAL SOCIETY.

Regular Meeting, held November 1, 1904.

The President *pro tem.* Joseph Fraenkel, M.D., in the Chair.

Two Cases of Bilateral Symmetrical Atrophy of the Thenar Eminence.—These were presented by Dr. I. Abrahamson. The first patient was a woman, sixty-two years old, whose family and personal history was negative. Her occupation was that of a housewife, which necessitated putting her hands in water a great deal, and she also assisted her daughter at needlework. Eight years ago she first began to experience numbness and paresthesia in both hands, with beginning atrophy of the thenar muscles, chiefly the flexor brevis pollicis. There were no trophic skin changes and no nerve tenderness. The atrophy was symmetrical in both hands. The second patient was a woman, fifty-two years old, a native of Hungary. Her occupation was that of a housewife. The symptoms were similar to those in the first case, but the paresthesia was most annoying at night. There was marked symmetrical atrophy of both thenar eminences. The speaker said he regarded both of these cases as examples of acroparesthesia with subsequent atrophy.

Dr. Charles L. Dana said the unusual feature of these cases was the symmetrical character of the atrophy affecting both hands. Not long ago, the speaker said, he saw a case of atrophy of the thenar eminence of one hand, with paresthesia and evidence of neuritic disturbance. In this instance, the condition had been produced by the Vardon grip in playing golf. In another case the patient was an elevator boy, and the neurosis had been produced by pulling on the wire rope of the elevator. While these occupation neuroses were not particularly rare, bilateral and symmetrical cases of this kind were extremely so.

DISCUSSION ON THE CLASSIFICATION OF THE MELANCHOLIAS.

Dr. Charles L. Dana opened the discussion. He stated that the term melancholia indicated to the psychiatrist a combination of symptoms varying in groupings, duration and intensity, but beneath all a dominant condition of painful emotional depression. It might occur as a symptom in various organic and degenerative cerebral diseases, but it was recognized in particular as a manifestation of two the period of involution of change of life and later. Second, that occurring in early and early middle life. No one, the speaker thought, disputed the distinctive character of melancholia of the first type as it occurred in middle and late life. The "melancholia of involution" was a chronic and incurable disorder. It was a psychosis accompanied with anxious, worrying apprehension, and was often a natural evolution of the constitutional worrier. It

was characterized by hypochondriacal and obsessive ideas, dysthesia and somatic delusions; by hallucinations, self-accusations, and at times by suicidal ideas and impulses. There was complete self-absorption, narrowing of consciousness, enfeebled attention and power of concentrated or constructive thought. There was no clouding of consciousness nor retardation of thought nor dementia. It was an agitated, worrying hypochondriacal psychosis. The melancholias which were seen especially during early life, and were at least characteristic of that period, had not such a single definite picture. That form which had been described as acute melancholia, however. was in its typical form a sharply defined condition, characterized by profound emotional depression, retardation and difficulty of thought, clouding of consciousness and other phenomena familiar enough to all. This form of melancholia, so Kräpelin and his followers teach, was not really melancholia, but only the melancholic phase of manic-depressive insanity, and it was proposed to substitute this term for all or most of the functional melancholias not belonging to the melancholia of involution. Hence we would have but one real melancholia, the chronic form of later life. Dr. Dana said he had been trying to fit this scheme to his experience, and for that purpose he had looked over the histories of over 400 cases occurring in his private practice. Of these he had closely analyzed 30, which he had seen more recently and in many instances followed for a long time. From this analysis he had reached the conclusion that chronic melancholia, under the classification of Kräpelin, was indeed a special disease, but not in all cases one of the involutional period. In its milder types especially, it seemed to him that pictures of it would be called anxiety psychosis, or depressive neurasthenia, and it was not unreasonable to suppose that in psychopathic individuals, or those with a special hereditary tendency, the nervous system should be subject to early chronic melancholia. He thought it possible that this same worrying psychosis might appear at the period of adolescence, when the disease was less intense, the somatic and sensory disturbances less severe, but the mental state essentially the same. The sharply defined delusional melancholia of early life, with great activity of thought, clearness of memory, intense self-accusation and powerful suicidal impulses belonged more to this type than any other. The association and alternation of mania with early, simple recurrent melancholia was an established fact, and the term manic-depressive insanity fitted this group of cases admirably, but in the speaker's list of 400 cases of melancholia, mostly not asylum types, there was a history of mania in only eight per cent. It seemed rather forcing the issue, therefore, to use the term manic-depressive insanity for these patients, who never had any mania. He was inclined to regard the melancholias of early life as simple melancholias of the involution type—or pre-involutional, if that seemed a better term. He would, at least, consciously associate their disorder to that form seen more typically and severely later in life. He would say that there were a great number of simple, functional, often recurrent melancholias that belonged to the manic-depressive type by reason of the neurasthenic and apathetic condition, the absolute loss of interest in life, and psychomotor sluggishness and enfeeblement, but he saw no reason to use the term manic-depressive insanity here. He would only use the term manic-pressive insanity when there was evidence of it.

Dr. M. Allen Starr said that Dr. Dana's remarks regarding melancholia would appeal to every neurologist and practitioner who did not constantly come in contact with the severer types of insanity. Those who were doing asylum work, however, might meet with considerable difficulty in grouping certain of the cases. Perhaps five per cent. of the cases in the average asylum could not be positively assigned to any definite group. The speaker said he was glad to hear Dr. Dana make a distinct protest against the term manic-depressive insanity. He had never been in sympathy with that term, for the simple reason that it did not coincide with our clinical experience in this country. He had carefully reviewed the records of about 280 cases that he had classified as melancholia, and he saw no reason to protest in any way aginst the classification that was proposed by Krafft-Ebing years ago, namely, simple melancholia, melancholia with delusions, and melancholia with delusions and agitation. Those three types embraced distinct varieties of the disease. The speaker said he also agreed with Dr. Dana that the type that rose to the stage of mania was extremely rare, in his own experience probably not exceeding five per cent. of the total number of cases observed. He thought it would be very unfortunate, therefore, to label these patients with a term like manic-depressive insanity, in spite of the fact that in 95 per cent. of the cases there was no mania whatever. Dr. Starr said that a careful study of his cases of mild melancholia had impressed him with the idea that the condition was a purely toxic neurosis. The symptoms were most severe in the early morning, and passed off largely during the day. Sixty per cent. of his cases never passed beyond the simple melancholia type, which was not the type met with in the insane asylums. The cases he had in mind were entirely conscious of their surroundings and of their own condition; they were in extreme dread of insanity, and they were not suitable subjects for an insane asylum and to incarcerate them in such an institution would be an outrage. About 35 per cent. of his cases correspond to the delusional type, and required watching to prevent suicide. Dr. Starr said he would like to impress upon the Society the existence of a true toxic melancholia. In fully 60 per cent. of his mild cases he believed that he had to deal with a purely toxic neurosis, and if we could eliminate the poison, we could cure the patients. He had noted that any intercurrent disease, such as grippe, pneumonia or malaria, that produced a decided change in the chemistry and nutrition of the body, arrested the symptoms in these mild cases of melancholia, and he had produced the same effect by the use of thyroid extract. Under the administration of this agent the symptoms of melancholia would be immediately relieved and remained absent until the temperature again dropped to normal.

Depression Instead of Melancholia.—Dr. Adolf Meyer said that his experience with the melancholias had naturally been of a different sort from that of Drs. Dana and Starr, having been largely confined to patients who were already committed to the asylum. His observations had led him to conclusions which did not essentially differ from those of Dr. Dana, although for practical reasons he would rather favor a different classification. On the whole, he was desirous of eliminating the term melancholia, which implied a knowledge of something that we did not possess, and which had been employed in different specific ways by different writers. If, instead of melancholia, we applied the term depression to

the whole class, it would designate in an unassuming way exactly what was meant by the common use of the term melancholia; and nobody would doubt that for medical purposes the term would have to be amplified so as to denote the kind of depression. In the large group of depressions we would naturally distinguish our cases according to etiology, the symptom-complex, the course of the disease and the results. A distinction into acute and chronic forms is not consistent with experience. Dr. Hoch finds that all attacks tend to become longer in advanced years. The distinction had best be made according to the intrinsic nature of the depression. From that point of view we might distinguish the pronounced types from the simple insufficiently differentiated depressions. Besides the manic-depressive depressions, the anxiety psychosis, the depressive hallucinations, the depressive episodes of dementia praecox, the symptomatic depressions, non-differentiated depressions will occur; especially the differentiation of the dementia præcox type frequently causes difficulty, where stupor and catalepsy supervenes. The speaker said he was somewhat surprised that no reference had been made to the difficulties in determining the depressions of dementia præcox. He took exception to Dr. Starr's statement that mania was but a rare event and only to be expected in the most agitated cases. He could not recall a single instance where a case of the pure agitated type developed mania, while on the other hand, the type that did not show the agitation, but a great deal of inhibition and subjective inadequacy—was the form that might develop mania. Dr. Meyer said that he would rather hesitate to accept Dr. Starr's idea that the intermission in the symptoms of melancholia produced by febrile disturbances proved the toxic origin of those symptoms, because an intercurrent disease was apt to produce a change in the symptoms of almost any mental disorder. The shortness of the time for discussion did not permit the review of about 300 cases of depressions to be reported on another occasion.

Classification of Insanities.—Dr. Ralph L. Parsons said that some years ago he made out a classification of the insanities that was provisional only, because the facts upon which to construct a scientific classification did not exist then nor did they exist at the present time. Different types of insanity were often very closely identified, and during the same attack the patient might exhibit symptoms of mania-melancholia and dementia. Dr. Parsons then exihibited a table that he had devised, in which the melancholias were divided into many different types descriptive of their cause, such as adolescent, puerperal, etc.

Remarks on Melancholia.—Dr. Joseph Collins said that while some writers on mental diseases claimed that melancholia was a very uncommon disease, and much less frequently met with to-day than mania, others maintained that there was no such disease as melancholia, and that that which we called melancholia was a symptom of a diagnosticable condition, which, being the real disease process, should be entitled to the name. Personally, Dr. Collins said, he was in sympathy with the latter writers, insofar as their position compelled them constantly to seek for the dependency of melancholia, but he was unwilling to accept their statement that there was no such disease as simple melancholia, *i.e.*, melancholia which was not a constituent of other disease, physical or mental. The general practitioner was likewise loath to accept such statements, because they seemed to him to be at variance with his experience. The difficulty in discussing the subject was that the term melancholia was used by writers with great latitude and absence of specificity. Melancholia, or mental depression, coupled with moral insufficiency, sadness and anguish, was of common occurrence. It was encountered in certain toxic states, such as alcoholism, and as the result of insufficient oxidation and deficient elimination. It was found associated with neurasthenia, paresis, general and cerebral arteriosclerosis, dementia præcox and mania, and also occurring without any of these associations. Every neurologist saw a great many cases which he diagnosticated as melancholia without being able to satisfy himself of the dependency of the melancholia, just as the general practitioner or consultant in internal medicine must often still make the diagnosis of indigestion without being able to satisfy himself that it was dependent upon one or more of a number of disorders conditions that were sufficient to cause it. When the neurologist had the opportunity of observing these cases for a protracted time he was unabled to classify them more specifically, and from an etiological standpoint more correctly. There was a tendency at the present time to put all cases of melancholia that could not be referred to organic disease and manic-depressive insanity under the head of "involution melancholia," *i.e.*, melancholia associated with retrograde changes in the tissues, and occurring at a time in life when such changes of the tissues set in physiologically, and therefore directly or indirectly dependent upon them. It was the writer's experience that considerably less than one-half of all the cases diagnosticated as melancholia, using the term in the specific sense mentioned above, could be placed in this category. Dr. Collins then cited, in detail, a number of cases of melancholia which illustrated the great variation in the onset, delineation and course of the disease, and the difficulties that beset the attempt to place them in one or two groups. The neurologist often had much difficulty in deciding whether such a case should be called neurasthenia, hypochondria or melancholy depression. Some of these cases eventually became insane (using the term in its legal sense), but he believed that the vast majority of them did not, nor was their mental capacity so interfered with that they had to abandon their business. Whether or not there was such a disease as acute melancholia was of the greatest importance because it carried with it the matter of prognosis. The outlook of manic-depressive insanity and involution melancholia had been fairly well determined, and the diagnosis of either one carried with it a serious prognosis. Dr. Collins said he agreed entirely with Dr. Dana, excepting to his statement that there were two types of melancholia with three names for them. There were three types of melancholia, namely, the acute, the manic-depressive and involution melancholia. So far as the manic-depressive type was concerned, the speaker said he knew of no disease with more clearly drawn clinical features, none which could be more readily recognized, and none in which the etiology, course and eventuation was more certain. He saw no more reason for eliminating manic-depressive insanity than he did for eliminating appendicitis, streptococcus meningitis or other well recognized conditions. As to the relation of toxic conditions to melancholia, Dr. Collins said he had never seen a case of melancholia that was relieved in any way by medication directed toward the supposed toxic agent, and the very fact that the symptoms became

intermittent or were held in abeyance by the administration of other poisons, or by an intercurrent attack of grippe or pneumonia would seem to militate against the contention that they were of toxic origin. Otherwise it would be a strong argument in favor of the doctrine of *similia similibus curantur*.

Dr. B. Sachs said that in a discussion of the classification of the melancholias, there was danger of going to extremes in both directions, and making the classification either too wide or too narrow. Under the influence of Krafft-Ebing and the older French and German writers the term melancholia was much abused. It should be restricted, he thought, to those cases in which there was a slowing up of all mental processes, associated, perhaps, with some self-accusation. This formed a very definite clinical picture, and he saw no reason why it should be eliminated. On the other hand, there were various forms of depression which could be differentiated from melancholia. In private practice he frequently made the diagnosis of simple depression; this he regarded as a transitory condition, and it had never occurred to him to look upon it as true melancholia, which was a true and very often a serious psychosis. To his mind, pure melancholia had always represented a typical and grave disorder. The question arose whether to discard the older classification entirely in favor of the more recent one of Kräpelin, with its comprehensive term of manic-depressive insanity, which included all types of melancholia, circular insanity, and what not. In picturing manic-depressive insanity, Kräpelin had shown great genius and insight, and Dr. Sachs said he indorsed that writer's wisdom in putting before the medical public the existence of a large group of cases that were characterized by typical symptoms. There could be no doubt about the existence of such a group, but he could not agree with the dictum of Kräpelin that all cases of melancholia were merely one stage of manic-depressive insanity.

Dr. A. R. Diefendorf, of Middletown, Conn., said he was surprised by the difference of opinion regarding the melancholias, as expressed by the neurologists and those who saw these cases in asylums, as it was certain that all the cases that eventually came to the hospitals for the insane had passed through the hands of the practitioner and specialist. As regards simple melancholia, there were several groups of those cases. There was one group in which the characteristic symptoms were mental sluggishness, a feeling of insufficiency or inadequacy, a lack of energy, an increased sense of fatigue, a slowing of the train of thought, difficulty of comprehension, perhaps a few indefinite hallucinations and possibly a few delusions. The emotional attitude of these patients was one of simple despondency. They took an abnormal view of life. There was another type of simple melancholia that occurred early in the course of senility.

Dr. Edward D. Fisher said he would certainly agree with the view that we had to deal with a simple melancholia which was distinct from that described by Kräpelin. Kräpelin's cases were those of later life, and differed from the melancholia which he found in manic-depressive conditions. There was in the so-called melancholia not so much absolute retardation of thought as in the class of cases of the manic-depressive type. Dr. Fisher said he had seen a number of cases occurring in young persons, perhaps about the age of twenty-five years, where they simply presented a psychosis which was described as melancholia, and where the patient made a complete recovery within three weeks to six months. He could recall one case in which at least fifteen years had elapsed since such an attack and there had been no signs of a recurrence. The speaker said he was certainly in favor of retaining the term simple melancholia, and he also believed decidedly in the manic-depressive type.

Anxiety Psychosis.—Dr. L. Pierce Clark said he was not in favor of the term involution melancholia. He thought of psychosis of the climacteric or the melancholia of involution should more properly be called an anxiety phychosis, because that seemed to be the great predominating factor. In the differential diagnosis of manic-depressive insanity and involution melancholia, the one essential feature was the retardation.

Involution Melancholia or Dementia Præcox?—Dr. A. J. Rosanoff said it was well known that depression was the most common symptom encountered among the insane. He thought that all forms of mental disease, without a single exception, might present this symptom. This fact perhaps accounted for the statement of the older writers with regard to the frequent occurrence of "melancholia." At the institution with which he was connected, and probably also at all other asylums, a considerable proportion of the depressed cases admitted had to be set aside as unclassified. The majority of these cases ultimately developed one or the other of the typical syndromes, but a small group still remained which could not be classified among the well-known psychoses. This group contained about five per cent. of the total number of depressed cases admitted to the asylum. This was merely a rough estimate, but the speaker said he felt assured that it could not be far from the actual figures. It had been proposed to designate these cases as "simple melancholia." It seemed to him that a new generic term would be entirely inapplicable to an extremely heterogeneous group of psychoses, such as these. With regard to manic-depressive insanity Dr. Rosanoff said it must be remembered that many cases presented during their whole life nothing but a number of attacks of simple depression. The diagnosis was made not at all from the occurrence of mania and depressive episodes in the same individual, but chiefly from the exceedingly well-defined symptomatology. He thought that Kräpelin had selected this term for the disease for the purpose of indicating simply that its manifestations might be either depression with retardation and dearth of ideas, or elation with restlessness and flight of ideas, or a mixture of these phenomena, but not that each individual case must present all the possible manic-depressive episodes. Some of the depressed cases of this disease were so mild that the patients were not committed, and were even able to continue their occupation; but even those cases presented the characteristic features of the disease, and one experienced in making the diagnosis of manic-depressive insanity would not have much difficulty in recognizing them. The occurrence of melancholia with anxiety and agitation at a comparatively early age had been referred to. The resemblance between these cases and those of involution melancholia of Kräpelin was only a superficial one. The speaker thought that probably almost all of them belonged to the dementia præcox group. On analysis their depression was found to be extremely shallow, it being at times but a simulated depression. Moreover, they presented mannerisms, stereotypy, neologisms, negativisms, emotional deterioration and

delusions of an exceedingly absurd or even impossible nature, contrasting with perfect orientation, intact memory for recent and remote occurrences, and a surprising alertness with regard to their surroundings.

Dr. Dana, in closing, said that on the whole, the position he had assumed in his paper had been largely sustained by those who had taken part in the discussion. He still insisted that there are two forms of melancholia, with a third that belonged more or less to one or the other. The two were the involution type and the manic-depressive. Outside of these, there were many cases of simple depression which he had learned from experience would never be anything else but simple depression, but which, if closely analyzed, would be found to belong to either the manic-depressive or the involution type. In his paper, the speaker said, he had confined himself to the functional types of melancholia, disregarding the group of simple symptomatic melancholias occurring in the course of organic brain disease. The classification devised by Dr. Parsons was very practical and interesting, especially for those working in institutions, but of course it was not intended at a text-book guide of melancholia.

A Case of Bilateral Facial Hemiatrophy.—This was presented by Dr. Edward D. Fisher. The patient was a young girl who about two years ago had an attack of persistent vomiting. Following this, progressive wasting of both sides of the face was noticed. There seemed to be no atrophy of the bone, but absolute loss of subcutaneous tissue. There were no sensory disturbances, no electrical changes.

Dr. B. Sachs said the case was unique, so far as his experience and reading went. It differed from the ordinary facial hemiatrophy in the wide distribution of the lesion, and the absolute disappearance of the subcutaneous fat without involvement of any of the other tissues. It was certainly not a scleroderma. The girl's body was apparently well nourished.

The Nature of the Nerve Lesion in Brachial Birth Palsy (Erb's Type).—Dr. Thomas P. Prout read a paper on this subject. He stated that the sequence of events in the production of the obstetrical birth palsies may be summarized as follows: The lesions are (1) immediate and (2) remote. The immediate lesion consists in a tearing of the perineural sheath surrounding and supporting the nerve trunk, and the incidental rupture of the blood-vessels belonging to it. Hemorrhage occurs into and beneath the perineural sheath. There is, furthermore, a severence of the nerve strands more or less complete, depending on the severity of the case. The remote lesion is brought about and its extent determined by (*a*) the healing of the perineural sheath; (*b*) the organization of the blood-clot; (*c*) the ultimate contraction of the cicatrix upon the nerve strands, which not only prevent their regeneration but determine a pressure neuritis in those not severed upon which it may chance to impinge. This factor is of very great clinical importance. An infant in which this accident had occurred, who remains more or less continuously peevish and fretful for some time afterward, and in whom the handling of the extremity greatly increases its pain and irritability, is suffering from a traumatic neuritis due to pressure upon certain nerve-strands of the organizing blood-clot and the contraction of the cicatrix in the perineural sheath. Cases that do not present this symptom have been produced by simple trauma to the nerve, without rupture of the perineural sheath, and will recover spontaneously, while in those cases presenting this sign of neuritis, a considerable palsy will follow, depending on the severity of the lesion. These facts have an important bearing on treatment.

Dr. Sachs said that a certain number of brachial birth palsies of the Erb type were due to pressure and nothing else. A large proportion of the cases were absolutely painless; there was simply numbness, but no pain, and no symptoms such as we could associate with a laceration of the nerve. The speaker thought that Dr. Prout took an extreme position in claiming that some of these cases, at least, were not due to pressure, and that laceration of the nerve was necessarily the cause of this type of birth palsy. There was no doubt that in some of the violent cases the nerve strands were torn, but in the large proportion of cases he thought the symptoms were the direct result of pressure and hemorrhage.

Dr. L. Pierce Clark thought from the data which he and Dr. Prout had at their command, that in the vast majority of instances the palsy was the result of stretching and laceration, and not of pressure. This was clearly demonstrated in the operative cases. In these, the recovery of the patient was uneventful, and the progress very satisfactory. The pathological work was particularly interesting, insofar as nothing like it had ever been done in connection with this type of palsy.

Dr. William M. Leszynsky said he understood from the paper that in those cases that did not undergo spontaneous recovery, surgical interference was necessary. That being the case, he assumed that Dr. Prout concluded that in all cases that recovered without operation, spontaneous regeneration of the nerve had taken place, and that those cases, therefore, had no lesion of the kind he described. The question therefore arose, when these cases should be operated upon and how could one know whether spontaneous regeneration would take place or not.

Dr. Prout, in closing, said that if spontaneous regeneration occurred, it was not necessary to operate. This could be fairly definitely known within a year or eighteen months after the birth of the child. The cases that did not recover spontaneously presented exactly the lesions he had demonstrated, which represented a condition in the perineural sheath of the nerve that prevented spontaneous recovery. It was well known that many cases recovered spontaneously, but those that did not were due to stretching and not to pressure. Those due to the latter cause would in all probability recover spontaneously. If they did not, however, pure pressure palsy was not dealt with.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

The Ninety-ninth Annual Meeting, held October 24, 1904.

The President, Wendell C. Phillips, M.D., in the Chair.

The proceedings began with reports of the various committees. The interesting features of these reports were the increase in membership as announced by the Comita Minora, and the improvement in the service of milk to New York City as the result of suggestions from the Milk Commission. There are now twenty-one farms that submit to regular inspection, and all together some five thousand quarts of the milk furnished to New York daily is obtained

under conditions entirely approved of by the Commission. Three other farms with a daily output of 1,200 quarts are getting themselves in readiness to submit to the Commission's regulations. There seems no doubt that before long only milk from regularly inspected sources will find a ready sale in New York.

Report of the Counsel of the Society.—Mr. Champe S. Andrews, the counsel for the Society, reported recent improvements with regard to the judicial view as to what constituted the practice of medicine in New York State. So far the medical law has threatened to be ineffective because of the absence of a wide enough definition of what constituted the practice of medicine. Recently a conviction before the Court of Special Sessions of a man who did not give drugs, but who insisted that "magnetism oozed from every pore of his body," and that this was the curative agent by which his patients secured health, has afforded the foundation for a precedent. The attention of the District Attorney's office was called to this decision, and as a consequence, it seems not unlikely that an authoritative definition along the same lines will be obtained from a higher court.

Number of Quacks.—Mr. Andrews said that there was a very large number of quacks in New York, and that only a few of them can be reached, mainly because of lack of funds on the part of the Medical Society. Recently the announcement that there were many thousand quacks in New York caused sensational headlines in the newspapers. To reporters who came inquiring as to the truth of this statement, Mr. Andrews said that if the New York newspapers would refuse to take the advertisements of quacks, and especially of abortionists, there would soon be fewer of them. It is the fact that they can so readily gain publicity through the columns of a supposedly respectable paper, that enables these people to carry on their nefarious business successfully. Mr. Andrews looks for the time very soon when special appropriation will be allowed for the purpose of securing the conviction of those who violate the medical laws. They are made for the protection of the community against those who have abused the confidence of the poor and the unwitting. The enforcement of the laws should be a matter of public policy and not be committed to the private exertions of a medical society.

Recent Pathological Advances.—The scientific business of the evening consisted of a series of short addresses, especially with regard to recent progress in various departments of medicine and surgery. Dr. Frederick E. Sondern spoke of recent developments in clinical pathology. He said that chemical pathology is progressing v ry rapidly, but unfortunately the amount of time required for the pursuance of any chemical examination, and the fact that any interruption of it is likely to spoil it, necessarily makes it almost impossible for the general medical practitioner to take it up. It can only succeed then in the hands of young physicians, or chemists who are not clinicians. This is, of course, an unfortunate state of affairs. Simplification of chemical methods, however, is undoubtedly common. It is very clear now that the neglect of the laboratory is as bad in the diagnosis of the disease as its exclusive use for diagnostic purposes.

Blood Pathology.—An improvement in the methods of examination for the coloring matter of the blood is sadly needed. Present methods are crude and inexact. This will evidently come along the line of examination of the absent amount of the hemoglobin and iron present in a given quantity of blood. It is leucemia particularly that blood pathology is developing. There seems no doubt now that besides acute lymphatic leucemia, which is coming to be well understood because of the number of cases observed, there is a true myeloid leucemia, that is an excess of white blood corpuscles, due to superactivity of the bone matter. Recent medical literature contains a number of existing cases of this kind.

Widal Reaction.—Dr. Sondern called attention to the fact that recent investigations seemed to make it clear that the presence of urotropin in the circulation gives rise to the Widal reaction even in persons who have never suffered from typhoid fever and who had no febrile condition at the time of its administration. Some recent experience in Japan with personal observations, shows how much better the Japanese use all the precautions necessary to procure an exact Widal reaction than is the custom in supposedly much more advanced countries. The amount of culture and of blood is taken very accurately, and the dilutions made according to very exact methods in Japan. It is only in this way that the Widal reaction can always be depended on. Dr. Sondern called attention to the fact that an increase in the number of leucocytes in infected cases is as yet of questionable value in regard to pus formation and the prognosis of the case. Careful differential leucocyte counts give much more satisfactory answers, than the mere number of leucocytes in general. Cytodiagnosis seems also to be gaining a foothold for itself as a diagnostic method. Dr. Sondern considers that present methods of diagnosis in examination of the urines are crude and apt to be indeterminate. It is probable that the amount of urea excreted in any one day or at any time, has no special significance unless the amount of material ingested by the patient is known. The present system of noting of history sheets in hospital wards, the number of grains of urea per ounce of urine does not give as much information as if the total amount of urea passed per day were always known. Owing to the uniformity of diet in hospital service, this would usually give some definite information as to metabolic processes and the course of excretion.

Antistreptococcic Serum.—Dr. William H. Parks said that Professor Escherich, of Gräz, has recently treated a series of scarlet fever cases by large doses of antistreptococcic serum, using as high as 150 c.c. of serum for a patient with reported good results. There was a time not so long since when the streptococcus was thought to be the probable cause of scarlet fever. Since the description of Mallory's bodies in scarlet fever, there has been a general tendency to consider that they probably represented the cause of the disease, and were very likely protozoic in nature. They certainly occur in all cases of scarlet fever, and may be found abundantly in the fluid obtained by blistering a scarlet fever patient. It is probable, therefore, that what Escherich really does is to prevent secondary complications in scarlatina, for it is well known that the streptococcus is likely to cause secondary infection in these cases.

Summer Diarrheas.—Studies made during the last year show that the summer diarrheas of children in our large cities in this country are not due to the dysentery bacillus, as was thought for a time, nor to any of the types of the Shiga bacillus. In fact, so far, it seems clear that acid bacilli are not concerned in the etiology of the disease. Some of the acid bacilli are found in normal individuals, while in some

cases of dysentery they do not occur. As would readily be concluded from this, dysenteric serum does no good in the treatment of the disease.

Diagnosis of Rabies.—Dr. William H. Park said that the diagnosis of rabies has apparently been very much simplified by the discovery that certain bodies resembling protozoa can be found constantly present in the nerve tissues of sufferers from the disease. They may be demonstrated even in a smear of the brain of an affected dog. They do not occur in normal animals. This would simplify very much one of the most serious problems in bacteriological diagnosis. Some discoveries are apparently about to be made with regard to tetanus. The question of injecting antitoxin into the sheaths of the nerves has been seriously discussed, and even tried in some reported cases. That some such method of injection was necessary has long been known and has recently been still further demonstrated by the observation that adrenalin will neutralize tetanus antitoxin, though it does not modify in any way tetanus toxin. If the antitoxin is put directly into the circulation, it is sure to meet adrenalin in sufficient quantities to neutralize it very materially while the toxin continued to spread upward through the nerve, unaffected practically by the slight amount of antitoxin that may reach it if the injections are made in the ordinary way.

Water Purification.—The most interesting thing with regard to the improvement of the water supply of cities is the introduction of copper sulphate as an agent for the destruction of algæ. As is well known, this substance is a disinfectant, and will kill ordinary bacteria in twenty-four hours even in a dilution of one to 400,000. As in this dilution it is absolutely harmless, it would seem to be a valuable agent. It kills the algæ very rapidly in badly affected water, and especially gets rid of the fishy smell and taste, which has been so obnoxious in certain waters in which algæ grow luxuriantly.

Some Fads in Surgery.—Dr. Howard Lilienthal said it has been suggested that the word "fad" is due to the use of the three initial letters of the words "for a day," which so well represents the essence of the fad. It is defined by the Century Dictionary as a trivial matter, or as an important matter followed up with more zeal than sense. Medicine and surgery, of course, are sure to be fertile fields for fads. It is easy, however, to suspect really excellent modification of current practice as being fads. In surgery, here in America, the last twenty years have seen many unfortunate fads. Oophorectomy was supremely overdone, and though now this special organ is not so much abused, hysterectomy is as yet a fad for certain gynecologists. At the present moment the gynecological fad, however, is the rivalry to see which surgeon can remove the largest fibroma per vaginam. One is reminded of the expression of the old negro woman who said to the young woman going to the hospital, "Don't you let them cut your stomach. You go to Dr. So-and-So. He'll take out your tumor through the pajama."

Movable Kidney.—The supreme field for fads at the present moment is the movable kidney. Some surgeons cannot palpate a movable organ without wishing to anchor it. Slight amounts of mobility of the right kidney are so common in women that there might be serious question whether a fixed organ on this side were not more abnormal than a movable one. Mobility should certainly not be the only reason for wishing to operate on a movable kidney. So long, however, as it continues to be so remunerative, the fad will probably continue. All sorts of symptoms are traced to a movable kidney. Dr. Lilienthal has recently seen a gastric carcinoma, in which an operation for a movable kidney had been done within a year before death. As regards operations for Bright's disease, theory has always been against them, except in such acute cases as those operated upon by Reginald Harrison and now practiced, is also against them.

Radiotherapy.—There seems no doubt that radium will prove of great service in the treatment of malignant growths. Where such tumors are deeper than the skin, however, no one would think of using any form of radiotherapy until after the knife has been employed if the cases are operable. After extirpation as far as possible, then radiotherapy may be employed to assure a cure. There is no doubt, however, that in some cases these methods of treatment seem to stimulate malignancy. The newer things in surgery have a definite place, but it is only after old, well-tried and established methods are proven unavailing. To run after every new notion is to expose oneself, not only to serious error, involving life in the case of serious surgical operations, but also keeping the surgeon from proper-rounded development of his surgical skill. The poet's old rule still remains the best advice in this matter:

> "Be not the first to lay the old aside,
> Nor yet the last by whom the new is tried."

Business Methods in the Practice of Medicine.—Dr. John S. Thatcher said the reason for success in medicine is not always easy to decide. It is not always a man of the most brilliant attainments who succeeds the best, nor is it the man always of most go-ahead qualities who makes an eventual success. Energy and straightforwardness seem to be the main elements for the practice of medicine. Genius seems to be scarcely more than an infinite capacity for taking pains. A charming manner is sometimes said to be the secret of success. It has its uses, but it must be combined with other qualities. It is not the most affable plumber that you send for again, nor the most courteous carpenter who gets all your work. Some physicians delay the hour of their visits on the pretense of being so busy, but a prompt business-like method will be better. Directness and thoroughness are qualities that must be cultivated. The story is told of an old physician who, in a hurry one morning, advised the young man who called on him to take a prescription that he gave him and felt sure he would be better, but when the young man said, as he was about to leave, that he was the son of an old friend, the physician said, "For Heaven's sake, throw away that prescription, and let me look you over!" There is an unfortunate fear of the possible evil results of telling the truth to patients that has gone entirely too far. For the patient, it is often better to know the worst. Even in hopeless cases, he rises more manfully to the emergency than when he fears the worst and thinks that it is being kept back from him. For the family, knowledge of the truth is better than the fearful uncertainty when it is known that patients are seriously ill. Of course, there are those who say that the physician should tell the truth, but in small quantities. There is a growing doubt, however, of the advantage of this policy. Unfortunately, physicians are not able to accomplish as much as they would like to. As Alonzo Clark once said, "Disease may be cured, but death is inevitable."

Postgraduate Medical Instruction.—Dr. D. B. St. John Roosa said that New York City originated and organized postgraduate medical instruction in the English-speaking countries. In England, notwithstanding well-directed efforts in recent years, postgraduate medical instruction has been a conspicuous failure. This is especially true of London. Everyone who has been in the English capital knows what limited opportunities for postgraduate instruction are going to waste there. Nearly the same thing is true of Edinburgh. Notwithstanding what might be accomplished in their great infirmary, the Scots have not succeeded in organizing postgraduate instruction. Paris is without a system that encourages physicians to come for instruction, and there is no hospitality, so that medical visitors looking for opportunities are almost driven away. In general, it may be said that the work is not appreciated in France.

New York Postgraduate Medicine.—As the result of proper organization in this city from 750 to 1,000 physicians are attracted here every year for postgraduate work. The organization of this system of instruction was successfully accomplished at a time when New York had lost some of her prestige in undergraduate instruction, and was being overshadowed by Philadelphia, if not also by Chicago. As a matter of fact, the postgraduate medical instruction movement saved the medical center for New York. At the present time, however, the system is at a standstill for need of funds. It is possible that something may be accomplished by affiliation with the regular medical schools. This affiliation was refused when the postgraduate system of instruction was initiated. There is no doubt now that the postgraduate courses have come to stay. No matter how much the increase of instruction in undergraduate courses, physicians will still feel the necessity of coming in direct contact with cases in order to fit themselves for practice, and, besides, physicians who have been out of practice for many years, will occasionally want to come back in order to set themselves *au courant* with the state of medicine at a given time. Perhaps the greatest compliment that has been paid to the New York system of postgraduate instruction is the fact that the plan adopted is now being imitated in Cologne and in Frankfort. The future of the system depends on proper recognition of its merits and a due support according to its needs.

SOCIETY OF THE ALUMNI OF CITY HOSPITAL.

114th Stated Meeting, held April 13, 1904.

Some Practical Points in Medical Diagnosis.—Dr. Morris Manges spoke extemporaneously on this subject. He considered, (1) cerebrospinal meningitis; (2) paratyphoid; (3) perforation in typhoid. He said that it was impossible to determine or even to understand these epidemics of cerebrospinal meningitis. The particular type under consideration was characterized by a sudden onset and a fulminating course. He cited two cases which had come under his observation, in one of which the mother had died and was buried.—one and a half hours later, the daughter, eighteen years of age, was comatose from the same disease. In the other case a man had gone into coma within an hour from the first symptoms. The headache of epidemic cerebrospinal meningitis, he said, is characteristic. Typhoid is apt to be frontal, whereas this is very general, and it is so severe that the patients cry out even though in coma, the pain being dreadful. Vomiting and photophobia are common. The posture is characteristic, flexion being typical with the patient lying on the side. The eyes are frequently bloodshot and the pupils irregular, face dusky and anxious. Herpes is typical of pneumonia and cerebrospinal meningitis. But the symptom is of more value in this disease than in any other for diagnostic purposes. As in typhoid, relapses are very common. The reflexes are soon diminished and König's phenomenon is always present. The eruption is variable both as to distribution and as to type. It often looks as though a rough brush had been used freely in the neighborhood of the great joint. The leucocyte count is usually high, not infrequently reaching thirty thousand. In establishing a differential, it must not be forgotten that there may be sugar in the urine, from cerebrospinal coma. Lumbar puncture is invaluable to prove the diagnosis without question, and as it has a distinct therapeutic value and does no harm, it is certainly indicative. The speaker advised the injection of a few drops of lysol directly into the spinal canal.

Paratyphoid.—The chief interest in this disorder centers in the fact that it affords an explanation of the so-called cases of short typhoid. It is characterized by the presence of the paracolon bacillus and by the absence of Widal reaction. Paratyphoid is simply not typhoid, its etiology being complex. It should therefore be called pseudotyphoid. Further differential points, which serve to distinguish it from typhoid are as follows: The facies are different. The patient appears more ill, there being a high flush over the malar bones. The spleen is apt to be larger. The rash is extremely profuse; this probably serving to explain the well-known old-fashioned belief that a free rash in typhoid is a good sign.

The classical picture of perforation is usually very untrue. The most important symptom is the question of degree and position of the pain. The pain of perforation and the normal pain of typhoid are often indistinguishable. The author considers that severe referred pain in the tip of the penis is pathognomonic of perforation. Collapse is invariably present if the perforations enlarge, and is equally sure to be absent if they are small. There is a distinct change in the general condition of the patient, although it is difficult to state the exact nature of this change. The pulse usually rises. It loses its dicrotic character. The condition of the abdomen is variable, distention being of little or no diagnostic value. What is characteristic is muscular resistance and rigidity, it being typically located over the perforation. In conclusion, he said, that in nineteen cases a sudden onset had augured favorably for the patient, simply because it had enabled surgical intervention to be practised. No one should be asked to give the positive symptoms of perforation, for if they exist, they have not yet been determined. The question of surgical intervention should be left open much as in the case of appendicitis. Probably 90 per cent of cases of perforation do not die, for in all probability a great many perforate which are never recognized. There is but one treatment, namely, operative, and that should be instituted even if there is only a suspicion of perforation.

Wood's Footsore Moros.—Gen. Wood says that the native constabulary paid by the United States are crippled by shoes, lose their stamina by wearing "civilized" clothes and are made fat and short-winded by an unaccustomed diet. The history of colonization is full of tragic instances of the evil effects of interference with the ways of primitive races.

BOOK REVIEWS.

A TREATISE ON OBSTETRICS. For students and practitioners. By EDWARD P. DAVIS, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia, etc. Second Edition. Illustrated with 274 engravings and 39 plates in colors and monochrome. Lea Brothers & Company, New York and Philadelphia.

IT is a pleasure to find an obstetrical text-book which does not begin with a description of the mons veneris and devote the first hundred pages to an anatomical description of the female generative tract. The writer appropriately considers the subject of obstetrics a senior study, and assumes that the student shall have become familiar with ovulation, menstruation, impregnation and the anatomy of the pelvis from other sources. The work is strictly an obstetrical treatise, possessing most commendable radical changes in the arrangement and presentation of the subjects. Much of the old nomenclature has been dropped and the mechanism of labor, fetal presentation and position has been simplified.

The author adopts the German plan of considering but two fetal positions. Cases in which the back of the child is directed to the mother's left are called first positions. Those in which the back of the child is toward the mother's right are called second positions. Cases in which the presenting part is not in front are considered instances of defective rotation rather than separate positions. A permanent and most excellent section of the book is the part devoted to the surgery of pregnancy, labor, and the puerperal state. Realizing how much suffering may be avoided by prompt repair of injuries received during labor, careful attention has been paid to the description of proper surgical procedures.

The chapter on milk modification and artificial feeding is brief and incomplete, the writer evidently intending that the reader shall acquire knowledge of other than the fundamental principles of the subject from other sources. A chapter is devoted to a brief description of the more common diseases of infancy, a convenient section for hasty reference or review.

The last section on the Jurisprudence of Obstetrics affords interesting and profitable reading.

This second edition has been thoroughly revised, is well-illustrated, well printed, neatly bound and is without question one of the best books on the subject that has yet been published.

MANUAL OF SERUM DIAGNOSIS. By Dr. O. ROSTOSKI, University of Würzburg. Authorized Translation by Dr. Charles Bolduan. First Edition. John Wiley & Sons, New York. Chapman & Hall, London.

THIS book is in part a translation, in part an amplification of Rostoski's short treatise on serum diagnosis, published in the *Würzburger Abhandlungen*, in 1903. The material on which the original German work was based has since that time become considerably more voluminous, and Dr. Bolduan has therefore, very judiciously added many important details upon serum diagnosis. There is also an important appendix embodying Wilson's conclusions on the Gruber-Widal reaction. The volume is, therefore, a reliable and thoroughly modern treatise on serum diagnosis and allied topics, both from the theoretical and the practical standpoint. The student of these phenomena can learn the essentials of serodiagnosis, as far as they have been elaborated in typhoid, tuberculosis, scarlatina, etc., in this little volume. For a complete or profound analysis of the problem, however, he will have to consult the larger works and the original authorities.

ACCIDENTS AND EMERGENCIES. A manual of the Treatment of Surgical and Medical Emergencies in the Absence of a Physician. By CHARLES W. DULLES, M.D., Fellow of the College of Physicians, of Philadelphia, and of the Academy of Surgery; Surgeon to the Rush Hospital, etc. Sixth Edition, revised and enlarged with new illustrations. P. Blakiston's Son & Co., Philadelphia.

THE appearance of this latest edition of a charming and well-known little book is welcomed by all. The present volume has been carefully revised, many illustrations and much new matter having been specially prepared for it. Particular attention has been given to the notes on accidents arising from contact with powerful electrical currents, good common-sense instruction being given in the very important method of how to remove a person who has been caught in such a current. A very important chapter is that which deals with the transportation of injured persons. The photographic illustrations of the methods employed are particularly serviceable to all readers.

A striking feature of this little book is its remarkable versatility, the chapter on the treatment of poisons and on poisonous plants being particularly significant in this respect.

BLOOD PRESSURE, as affecting Heart, Brain, Kidneys and General Circulation. A practical consideration of Theory and Treatment, by LOUIS FAUGERES BISHOP, A.M., M.D., Physician to the Lincoln Hospital, New York City. E. B. Treat & Co., New York, 1904.

Too little is as yet definitely and finally known as regards blood pressure for a monograph with regard to it to be other than theoretic. Dr. Bishop's book is mainly concerned with the theory of the subject, though it also contains the details of some observations on medical patients with the Riva Rocci Sphygmomanometer and some really suggestive hints as to the treatment of patients in whom high arterial tension is a main feature.

CLINICAL LECTURES ON MENTAL DISEASES. By T. S. CLOUSTON, M.D., Physician Superintendent of the Royal Edinburgh Asylum for the Insane. Sixth Edition. Lea Brothers & Company, New York and Philadelphia.

IT is always a mental enjoyment to find a book that has gone through five editions, extending over a number of years that has been able to keep its old moorings because of their soundness and yet find it laden with much of the newer fruits of research.

It can be consistently said of Clouston that the body of his work remains the same because it was so excellently done in the first place. No one has exceeded him in the clearness and directness of his clinical pictures.

In modern psychiatry two distinct trends are observable among the many streams of new thought—the pathological and the psychological. Modern psychiatric pathology is being attached by the same methods of research as general pathological questions, much to the advantage of psychiatry. In this line Dr. Clouston has been able to keep his work well advanced, although at times he permits the "auto-intoxicationists" about him to sweep him away from these same general pathological truths.

The newer psychology, however, is not as well revealed in this present instance as we should like to see. In this respect we believe that Clouston lays behind the modern treatises of Lichen, of Wernicke, Kräpelin, Tanzi and others. Nevertheless, for students or non-psychologically trained practitioners we know of few safer books to recommend than this.